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# THE JOURNAL

OF THE  
OKLAHOMA STATE MEDICAL ASSOCIATION

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JANUARY 1923

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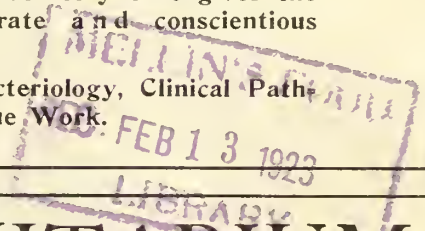
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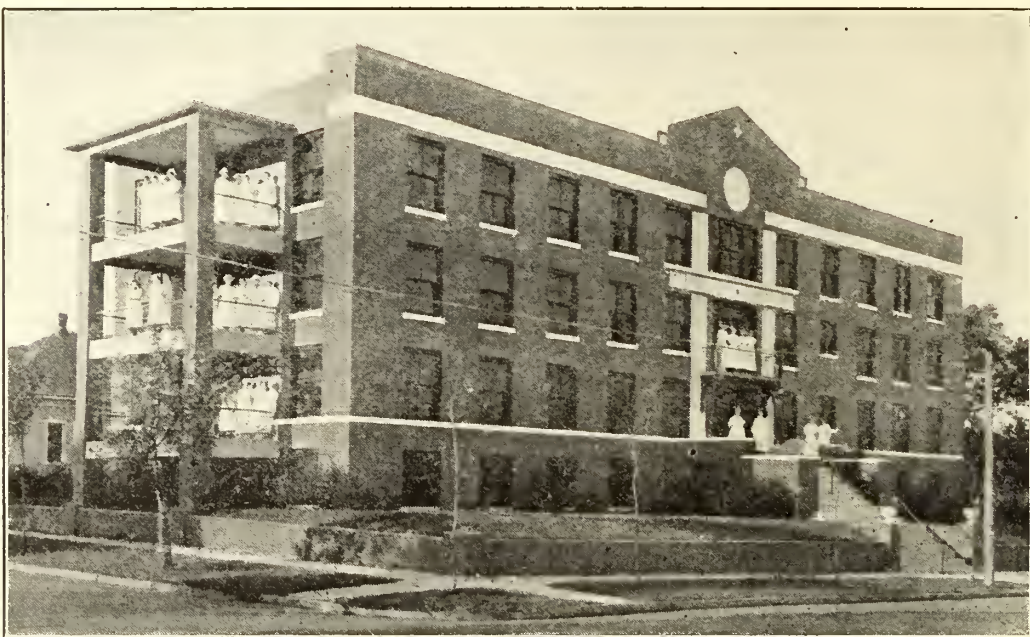
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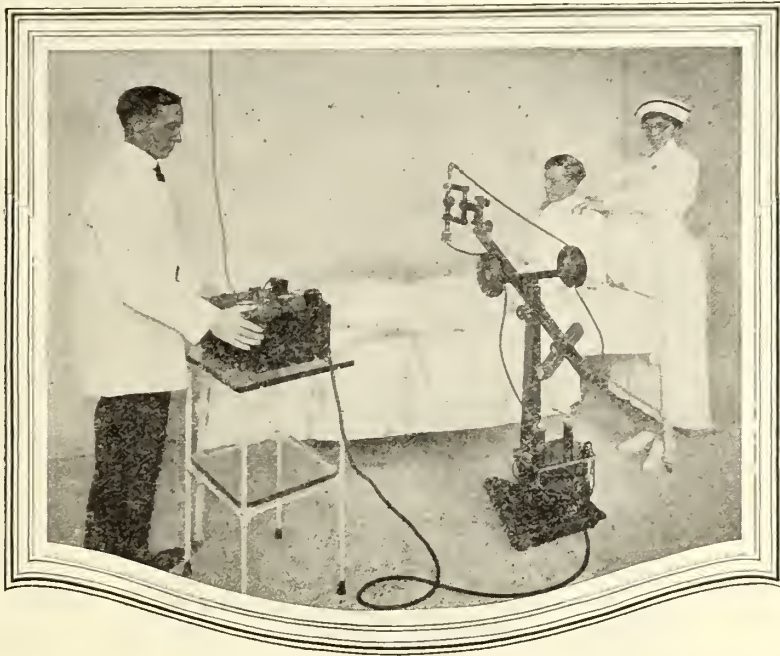
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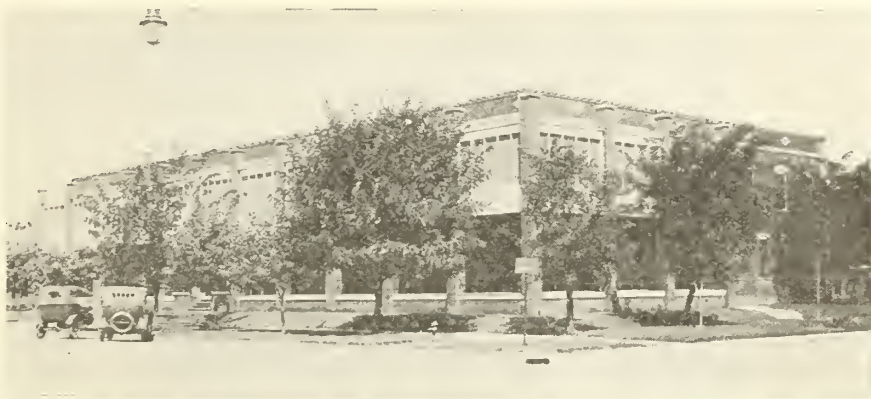
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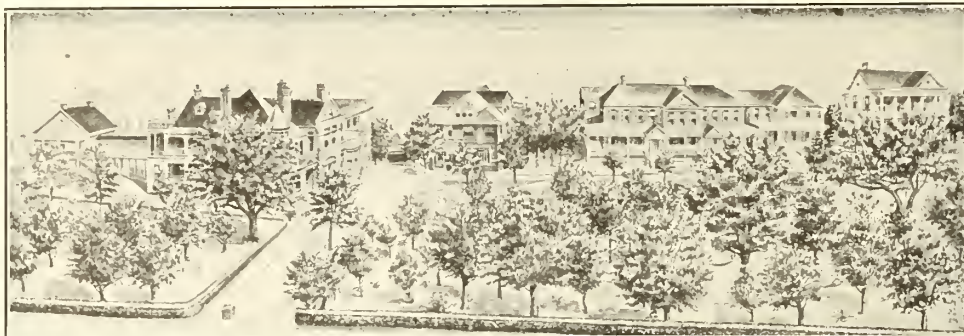
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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., JANUARY, 1923

NUMBER 1

### APPENDICITIS AND APPENDICEAL COLIC

ROSS DAVID LONG, M. D.  
Oklahoma City, Oklahoma

A surgical review of the vermiform appendix.

An endeavor to decide the status of appendiceal colic.

I shall endeavor to prove:

1. Appendiceal colic, has, at times, a separate entity;
2. It is a factor in the preoperative diagnosis; and
3. It can exist with, or without, any recognizable pathology.

**HISTORY OF APPENDICITIS:** It was in 1877 MORTON<sup>1</sup> of Philadelphia and TRÉVES<sup>2</sup> of England, contend they performed the pioneer operation for appendicitis. But, inasmuch as they failed to diagnose their cases, the honor of priority is given to KRONLEIN<sup>3</sup> of Germany who, in 1884, with the aid of MIKULICZ<sup>3</sup>, diagnosed, and removed an appendix.

**EARLY OPERATION ADVOCATED:** FITZ<sup>4</sup> of Boston, and KRAFT<sup>5</sup> of Lusanne, Switzerland, in 1888 were the pioneers in advocating early operation.

JOHN B. MURPHY<sup>6</sup>: In 1889 performed the first appendectomy in a scientific manner, and in 1890 began his campaign for early operation in acute appendicitis, which view he always maintained.

**PIONEERS IN APPENDICEAL COLIC:** In 1892 V. HOCHSTATTER<sup>7</sup> and C. L. TALMON<sup>7</sup> of Paris wrote on this subject, the latter a book of 272 pages, and some twenty years ago HANSEMANNS<sup>8</sup>, of Berlin, reported on four hundred autopsies, with conclusions that the predisposing cause was always some obstruction to the outlet into the large intestine, or presence of a foreign body. Also WELLER VAN HOOK<sup>9</sup>, one of the well known Surgeons of Chicago and teacher at Northwestern

University Medical, and whose article on the subject, written some fifteen years ago, and personal communications, inspired me in the work of this review, has done considerable research along this line and entitled to much credit therefor.

**ANATOMY: THE CECUM**—Is a blind pouch situated below the colic valve, measuring three inches by three inches in diameter.

**THE COLIC VALVE:** Buttonhole, like, invagination of the ileum into the colon with a fraenum, running transversely thereof. When the cecum is full, and it is prone to become impacted with feces, the valve is closed and the fraenum taut, of course, to obtain that end.

**VERMIFORM APPENDIX:** It is appended to the lower, medial, aspect of the cecum, of from one to nine inches in length and varying from the size of a pin to that of a No. 7 French sound in diameter of its lumen. It is composed of longitudinal and transverse muscular fibres and submucous and mucous membranes, and has 25,000 Lieberkuhn and 300 to 400 solitary glands (KELLY<sup>10</sup>). Above its opening into the cecum is a semilunar fold of mucous membrane—the VALVE OF GERLACH and on the opposite side within its lumen may be found a second fold, known as, NANNINGA'S FOLD<sup>10</sup>.

**FINNEY, J. M. T. ON APPENDIX IN CHILDHOOD:** There is an anatomical basis for the clinical differences observed in appendicitis—to-wit: insidious onset and rapid progress toward perforation, in that the appendiceal coats are much more delicate, especially with reference to the SUBMUCOUS coat, which, as pointed out by HALSTED<sup>12</sup>, MOYNHAN<sup>13</sup>, HEYD<sup>14</sup> and others, determines the strength of the intestinal wall.

HEYD<sup>14</sup> also refers to the submucous layer as being **absent** and hence accounts for the ease of perforation in children, and

in a personal communication accredits MORRIS in his anatomy with so admitting.

**ATTACHMENTS:** An Anatomist at Bellevue Hospital Mortuary, teaching surgery on the cadaver contended to me that there was an attachment ligamentous, of the cecum to the posterior abdominal wall. I am satisfied he is right in about five per cent of cases as verified by BERRY where the peritoneal covering is incomplete and the cecum has an iliac fascial connection. Otherwise the only attachment is mesenteric attachment or suspension.

**NERVE SUPPLY:** Coeliac plexus, through the mesenteric plexus and its autonomic system—which can act as a true reflex center with reference to pain symptoms.

**ABNORMALLY LOCATED APPENDIX: Retro- or Intra-hepatic—**In the first few weeks embryologically the intestine is coiled, twisted, to the left, in the umbilical cord, attached to the vitellin duct; during growth, using the duct as an axis, or Michels diverticulum, it rotates to the right, and if fusion occurs, it will become situated behind or below the liver.

Tenth week embryologically, duodenal mesentery, (acquired from lesser omentum) fuses with the posterior wall; transverse colon mesentery fuses with duodenal anterior surface, CECUM acquired SUB-HEPATIC position with its transverse colon curved across the abdomen, and if development is arrested the appendix will be abnormally located.

**Left sided appendix:** If the coils of ileum are displaced from behind the cecum in its descent, we have duodenum and colon rotating to the left at the point of crossing of large and small intestine, producing a left sided appendix due to fusion of the cecum to the posterior abdominal wall.

The left sided appendix is not so unusual but that surgeons should have it always in mind. WARBASSE<sup>15</sup>.

Undescended ceca occur in three per cent of females and seven per cent of male subjects. The appendix of an undescended cecum has a tendency to preserve the fetal type. It is frequently associated with an undescended testis or ovary. ROBINSON<sup>16</sup>.

**MESO APPENDIX:** Triangular or quadrilateral in shape. It usually extends to

the tip of the appendix, or ceases at the junction of the outer and middle third, or even proximal thereto. Short mesenteries are productive of sharp bends or twists causing obstruction, stagnation and formation of so-called stones, and APPENDICEAL COLIC. McCOSH<sup>17</sup>.

"Most diseased mesoappendices are curled up, on account of the shortness of the mesoappendix." J. B. MURPHY<sup>18</sup>.

**ETIOLOGY, Predisposing Cause: Disorders of digestion—**History of constipation in 43 per cent of cases, and associated with a hearty meal or indiscretion of diet, with colon filled with scybalous masses which also filled the cecum, a few hours after eating awakened from sound sleep by agonizing colicky pain, accompanied with vomiting. KELLY, page 361. Menstruation also, according to KELLY may evidence intimate relationship with attack of appendicitis. **Trauma.** Straining, bicycle-riding, jumping from street car, swimming, all factors according to KELLY.

**Predisposing Causes:** Ascarides, tapeworms, and echinococci are the principal parasites. Of the diseases enterocolitis, cholecystitis, tonsillitis, influenza and acute rheumatism.

**EVENS<sup>20</sup>:** Of 236 cases of appendicitis ninety per cent had primary infections of the upper respiratory tracts with a prodromal period of 16 days, preceding the attack of appendicitis. KRETZ<sup>21</sup>: Appendicitis begins as a metastatic disease of adenoid tissue—infectionatium the nose and throat most frequently. MANTLE<sup>22</sup>: Believe bacillus coli exciting cause of colitis and appendicitis secondary thereto. And Sir Frederick Treves recognized colitis as the chief cause of failure to relieve the patient following appendectomy. The symptoms of the remaining colitis simulating those of appendicitis, VAN HOOK also calls attention to catarrh of the colon and claims often the removal of the appendix cures the condition.

**Exciting Cause:** Bacillus coli communis in 86 per cent of cases and streptococcus in about 20 per cent. Staphylococci are no strangers to the appendix (MURPHY) especially in abscess in the walls thereof.

Koch's bacillus and the streptococcus may escape through the walls of the appendix into the peritoneal cavity—that is not true of the staphylococcus. Streptococcus may

live in the appendix in a semipathogenic state.

#### APPENDICEAL QUINTET SYNDROME OF SYMPTOMS:

1. PAIN. 2. NAUSEA or VOMITING. 3. LOCALIZED SENSITIVENESS AND MUSCULAR RIGIDITY. 4. ELEVATION OF TEMPERATURE. 5. LEUCOCYTOSIS.

**PAIN:** Some patients describe it as a general colicky abdominal pain, others as a boring, stabbing or tearing pain, and, still others as a dull, sickening, depressing sensation. That it becomes localized in the right lower quadrant and usually reaching its maximum in five or six hours. That recurrence after severity has diminished is an unfavorable sign. (McCOSH<sup>17</sup>).

**MUSCULAR RIGIDITY:** The most characteristic symptom of congestion and **inflammation**, the slightest touch increasing it. Some hours usually elapse before its presence can be definitely recognized. It may be confined to 4-5ths of an inch or almost general over the right lower quadrant. (McCOSH<sup>17</sup>).

**MURPHY on TEMPERATURE:** Temperature in acute appendicitis must always be present. Further it never precedes the pain. It should begin in from one to twenty-four hours after the onset of the pain.

#### APPENDICEAL COLIC:

**VAN HOOK<sup>10</sup>:** The abdominal viscera are supplied with a muscular and elastic apparatus. The muscular, during systole, furnishing the force and the elastic during rest, diastole, stores and utilizes it. Any sudden increase of pressure in a hollow organ, produces pain, depression and collapse. Colic is common to the gastrointestinal tract, biliary ducts, pancreas, kidneys and bladder, as well as the uterus and appendages.

#### ETIOLOGY:

**WELLER VAN HOOK<sup>10</sup>** divides into extrinsic and intrinsic.

**Extrinsic:** 1 Adhesions. 2 Pressure from tumors or neighboring organs, and 3 Quass constrictions of the neck. **Intrinsic:** Congenital stenosis, aided by the valve of Gerlach.

**ANDREW J. McCOSH'S<sup>17</sup>** EIGHT etiological factors is the best classification I have found and are given herewith:

1. Frequently occurs independently of any actively inflammatory process.
2. Stagnation of contents of the cecum, associated with gaseous distension, accounts
3. **Short mesoappendix, with bent or twisted appendix** and a slight inflammatory process in the neighborhood.
4. Concretions (fecoliths, etc.) with, or without stricture of the appendix.
5. Parasites—most commonly oxyuris—within lumen of the appendix.
6. Adhesions between the appendix and the neighboring organs, which have resulted from some previously inflammatory process, may be responsible for the attack.
8. Interstitial neuritis and atrophy of the nerve fibers supplying the walls of the appendix has been noted to cause chronic appendiceal colic.
9. However, it is often found to have a pathological basis as an etiological factor. It may be due to inflammatory obstruction at the appendiceal neck.

#### SYMPTOMS

##### Simple Colic:

Pain, colicky, sudden in onset, ceases or loses its entity if continues over ten or twelve hours.

Nausea or vomiting.

Pressure may relieve, as in neuralgia.

**No rigidity**—may develop, however, but believe colic will then lose its entity.

Temperature. **ABSENT.**

Leucocytosis. **ABSENT.**

#### APPENDICITIS

Pain, may be colicky (forty-three per cent) boring, burning, stabbing or tearing or dull sickening in nature.

Nausea or vomiting.

Sensitive to pressure.

Rigidity. Some hours usually elapse before its presence can be definitely recognized. **McCosh** Characteristic.

Temperature: Must be present.

Leucocytosis: Present.

**RIGIDITY** Is a most characteristic symptom of congestion and inflammation, and is an important differential point, I believe.

**LEONARD FREEMAN<sup>19</sup>** says: "The question you raise has always been an interesting one and is not easily decided.

I feel sure that there is such a thing as appendiceal colic, which may occur without leaving traces of inflammation behind it. It is due, I think, to an effort of the appendix to get rid of some foreign body, fecal or otherwise, and is analagous, of course, to an intestinal colic. If you cannot prove it, at least it is difficult to dispute. I have seen instances in which such a colic seemed to exist and at operations done a foreign body discovered without inflammatory changes. It would stand to reason that the **rigidity would be less** and rise of **temperature would be absent.**"

VAN HOOK: "It is characterized by spasmodic pain, with rigidity of the abdominal wall, disassociated with inflammatory condition of the appendix. **THERE CAN BE NO ELEVATION OF TEMPERATURE.** Pain and rigidity is due to protective effort. Collapse may be a factor and the whole difficult to differentiate from true appendicitis. As a rule colic are recurrent. Patients recognize the similarity in the attacks. Learns that the pains seem to first involve the whole abdomen and soon become concentrated about the appendix; possibly of only a few hours or days, leaving a soreness in the location of the appendix."

He also says: "Tormina or colic of the appendix is a malady distinct from, although it may be coincident with, appendicitis." With which point I agree. And where colic occurs one may, later, get appendicitis, usually does. A subnormal temperature must be considered with interest because it may precede fever, and be due to the depressing action of toxins.

KELLY<sup>11</sup> ON PAIN: Onset sudden in forty-three per cent cases admitted to John Hopkins hospital, sharp, cramp-like in abdomen. Occurs in RLQ in thirty-three per cent cases twenty per cent no definite localization, pain radiating through whole abdomen. The second most frequent location was umbilical region, and in somewhat fewer cases primarily in epigastric region.

I believe it is the consensus of opinion that appendiceal colic does not preclude the necessity of an appendectomy in such cases.

WARBASSE<sup>15</sup>:

"Colic should be distinguished from appendicitis. Also the surgeon should always be ready to remove the appendix, because the condition which provokes the colic may continue and engraft inflammation upon it."

AN ADVERSE OPINION BY J. B. MURPHY<sup>6</sup>:

"It has been erroneously said that normal appendices have been removed in cases where diagnosis of appendicitis was previously made. A **PROMINENT SURGEON ONCE MADE THE REMARK THAT HE HAD SEEN SEVERAL NORMAL APPENDICES REMOVED IN ONE MORNING AND IN A SINGLE AMPHITHEATRE:**

"In reference to this remark I wish to state that an appendix from four to ten weeks after the acute inflammatory process can be restored to its normal gross appearance; the microscope being the only means of demonstrating the previous existence of the lesion. This has led to many misrepresentations and many erroneous observations when the appendix has been removed in the interval. It can not be too forcefully impressed, the restorative properties of the appendix, after inflammation, returning to almost normal appearance. In the last year and a half I made it a point that my pathologist should examine with great care every appendix. Consulting my pathological records, I have found that in about ten per cent of the appendices for which the pathologist, in his description, has chosen the expression, 'Almost normal appendix,' the microscopical records read either 'Round-cell infiltration of the mucosa,' or 'Marked round-cell infiltration of the mucosa,' or 'Miliary abscesses in the mucosa and submucosa,' or 'Hemorrhage of the mucosa and submucosa,' or even 'Disappearance of the mucosa,' 'Thickening of the muscularis and thickening of the vascular coats.'"

MURPHY<sup>15</sup> ON SYMPTOMATOLOGY:

"It is often recurrent, but is **NOT** associated with **FEVER.** It is always of short duration. Also in appendiceal colic abdominal tenderness or muscular defense are absent."

Doctor BAILEY made a pathological examination of an appendix for me in a case that I diagnosed, before the operation, as one of Appendiceal Colic, and failed to find any round-cell infiltration, or any abnormality whatsoever.

I had a case also walk into my office, all doubled up, hand supporting McBurney's area, arriving at the examining table he doubled back, slipped up on the table, stretched out and did not draw up his knees.

On pressure over the appendiceal area he stated pressure relieved the pain. There was no temperature. My diagnosis was appendiceal colic, operation not imminent, but should do it later, as attacks will probably recur.

CONCLUSIONS: Summarizing the findings—

**1. Appendiceal colic, has, at times, a separate entity:**

I believe the majority of operators will concede this contention. Such concession has been quoted from a number, as: Warbasse<sup>15</sup>, Murphy<sup>18</sup>, Freeman<sup>19</sup>, Van Hook<sup>10</sup>, McCosh<sup>17</sup>. An old adage of Doctor J. B. Murphy's<sup>6</sup> was: "No temperature, no appendicitis." He stated that in one case where no temperature had been present in the first thirty-six hours of the attack, he refused to operate on the patient, although she was on the operating table, he manipulated the supposed appendiceal abscess and found it to be a displaced kidney.

**2. It is a factor in the preoperative diagnosis.**

I believe we all have had cases where the degree of pathology anticipated was not verified on operation. Is it not better to anticipate the absence of pathology and operate on a case of appendiceal colic, than to be chagrined because the expected was not verified? I repeat, the case of Colic will become, no doubt, one of appendicitis, and should be removed.

**3. It can exist with, or without, any recognizable pathology:**

Doctor Murphy disagrees with me. Many will agree with me, however, and I have referred to one case which Dr. Bailey will verify. Also the "Prominent Surgeon" mentioned by Dr. Murphy will agree with me.

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#### ACUTE APPENDICITIS

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If any justification is needed for presenting before this section a paper on such an everyday subject, that justification will be secured by a statement of the reasons which moved the writer in preparing the paper.

First: The writer believes that the purpose of a scientific paper should be the advancement of the science of medicine—should be to increase the efficiency of the healing art in conserving health and prolonging life rather than to indulge in verbal pyrotechnics or publicity propaganda.

Second: The appendicitis patient, like the poor, we have always with us. In other words, appendicitis is the most frequent, single, severe, acute organic disease of the abdomen—and one of the most dangerous.

Third: It has been the experience of the writer—as it is, perhaps, of most surgeons who do referred work—that too large a proportion of the referred cases which he is

asked to operate are delayed cases in which such complications as rupture of the appendix, abscess formation and intestinal obstruction require drainage and thus entail a prolonged convalescence and the danger of permanent and crippling sequelae. The result of such delay is known by its fruits—the mortality and morbidity rate of appendicitis has not been lowered in the past fifteen years as our knowledge of the disease would warrant. Edward H. Oschner (1) reported 373 deaths from appendicitis in Chicago in 1919—and he continues: "As appendicitis is not a reportable disease it is impossible to deduce the mortality." He concludes that, "The mortality rate in appendicitis in Chicago is still somewhat too high."

The latest statistics of the Prudential Life Insurance Company (2) show a total of 10,029 deaths from appendicitis in 1919, in a population of 85 million—the registration area of the United States. Think of it! Such a death rate is appalling and, it seems to the writer, absolutely unjustifiable in a disease which is so common, which ought to be so thoroughly understood, the symptoms of which are so uniform, usually so clear cut, and the prompt treatment of which is so successful in conserving health and saving life.

The words of the late John B. Murphy are almost as true today as when he uttered them on April 7, 1915. Let me quote them from the June 1915, "Clinics."

"Just recently a critic took a Chicago surgeon to task, in the columns of a medical journal, because the latter had published a colored picture of a gangrenous appendix in connection with a practical talk on its proper treatment. The critic intimated that appendicitis was ancient history. It is ancient history; but does that statement mean that all practitioners are masters of the subject, or that the disease is efficiently handled at the present time?

"In looking up recently for the 'Year Book of Surgery' hospital statistics on the results of operations for appendicitis, what mortality rate do you suppose I found? The average hospital mortality rate is just a little **over ten per cent!** This includes appendicitis cases of all classes brought to the hospital for operative treatment.

"Is it time to stop talking about appendicitis? No! It is just time to **begin** talking about appendicitis, and talking most seriously and earnestly about it. When you know that in our best hospitals better than

ninety-eight per cent of all acute appendicitis cases, including those with abscess and peritonitis are saved, and when you know that scarcely one out of a hundred cases of acute appendicitis operated upon during the first twenty-four hours of the attack is lost, think what the results must be in the other hospitals to make the general average so appalling! There is no palliative excuse for a mortality rate of ten per cent in appendicitis. The rate is simply shocking. These patients did not die because of the operation—do not misunderstand me—they died in spite of it. They died in a hospital under a surgeon's management, but they died not so much because of any fault in technic as because of the fact that they did not reach the hospital in time for a successful operation. Procrastination was the cause of death—the almost criminal cause.

"The initial symptoms of appendicitis are clean-cut and almost unmistakable. The later symptoms are equivocal and not to be relied upon. The mode of onset of an attack of appendicitis is no clue to its probable course of complications. We can never tell in a given case what the next day will bring. Therefore, operate today! By operation we take the course of the disease into our own hands. By not operating we leave the case in the hands of a blind and often terribly cruel fate.'"

When we remember the great skill and experience and conscientiousness of Dr. Murphy these words of his should have a tremendous weight with the rank and file of physicians—particularly since they are corroborated and seconded by practically every surgeon of experience in America. And not only so; our foremost internists are practically a unit in agreement with the teachings on appendicitis as voiced by Dr. Murphy. Let me quote from a recent address by Dr. Norman Bridges, (2) a well known internist of Los Angeles: "We internists have almost as large a responsibility as the surgeons themselves. We ought not only to seek to have every appendicitis case operated upon early, but we ought, for numerous other conditions and mysteries in the abdomen, to insist upon exploratory laparotomy when it can be done by a surgeon of large experience."

Why then, if the leading internists and the surgeons are agreed as to the treatment of appendicitis, do we continue to have this tremendous toll of death exacted by the disease? Nor is the mortality rate the only loss. Great as it is, the complica-

tions ensuing in the neglected cases which survive are equally disastrous. For every one person who dies of appendicitis there are many who, besides undergoing a more difficult and dangerous operation because of the delay, suffer a prolonged convalescence, incur greatly increased hospital expense and loss of time, to say nothing of the numerous, secondary complications which are more or less disabling. Among these are: adhesions with their frequent train of digestive disorders, pain, nervous disturbances and even intestinal obstruction; sloughing wounds and hernias, secondary infections of the gall bladder and bile passages or of the pelvic organs, subphrenic and liver abscess, pyemia. It must be admitted that most of these sequelae are essentially the complications of delay.

To recur to my former question: If the surgeons and the leading internists are agreed as to the virtues of an early operation in acute appendicitis in order to save life and to forestall such crippling complications, whose is the responsibility for the continued, deadly delay in the early diagnosis and proper treatment of this dangerous disease? Charitable as we may wish to be, we must acknowledge that it is the general practitioners, the family physicians who see the vast majority of appendicitis cases first. Therefore, the burden of proof is on them to show that they are alert to detect this disease in its incipient stage and that they influence the patient to accept an early operation—early, that is, with reference to the beginning of the attack. But so long as there are physicians who see in abdominal pain and vomiting only a “belly ache”—and to whom every ablated appendix is “normal” unless it is gangrenous or perforated—so long will this army of poor unfortunates be compelled to reap a harvest of suffering and death. We ought to be broad enough to admit that if we do not vastly improve this record we shall be untrue to the best ideals and to the highest standards of our profession. It ought to be worth the while of any body of progressive physicians to review the symptoms of this important disease, and to consider briefly the treatment.

The question of differential diagnosis in the vast majority of cases will be confined to the consideration of only a few other conditions likely to be mistaken for acute appendicitis. Chief among these are diseases of the gall bladder and of the bile passages, the several varieties of intestinal obstruction, ulcer of the stomach or duo-

denum, pelvic disease, especially right sided salpingitis, or possibly ruptured ectopic pregnancy, and disease of the right kidney or ureter, such as pyelitis, stone or stricture with retention and infection.

What are the usual symptoms of acute infection of the appendix? As Murphy so emphatically said: “The initial symptoms of appendicitis are clean-cut and almost unmistakable. The later symptoms are equivocal and not to be relied upon.” This is true for the reason that the initial or primary symptoms are reflex—due to mucous membrane irritation—while the advanced symptoms are secondary—due to peritoneal extension or, in other words, to complications. In the majority of cases of uncomplicated acute appendicitis—in ninety per cent at least—Murphy’s dictum holds true—for the symptoms of appendicitis have not changed in the least since Murphy’s death. They are as characteristic as ever, and the diagnosis can practically always be determined by a careful inquiry into the symptoms and the order of events in which they occurred.

**Pain**, sudden in onset, is the first symptom of which the patient is conscious. In fact, it is very striking how many of our patients are awakened from sleep by the pain. The pain is continuous, yet with exacerbations and, during the first six to twenty-four hours, is general over the epigastrium. It does not begin in the lower abdomen or lateral or pelvic quadrant. If it is referred to any other region than the epigastrium, in the beginning, be on the lookout for some other diagnosis than appendicitis or, at least, for complications. (I am speaking, now of acute appendicitis not associated with other painful lesions.) Following the pain at variable intervals and in varying degrees, there occur in most cases **nausea** and vomiting. This may range from slight, transient, almost negligible nausea to occasional or almost continuous and intractable emesis. The important thing to remember is that the nausea and vomiting follow the pain, they do not precede it, as is more usual in gall bladder disease.

Closely associated with the nausea and vomiting and the pain is the appearance of abdominal sensitiveness, **tenderness** on pressure. In the majority of cases this so-called “point tenderness” will center approximately over McBurney’s region. But we must not forget that, perhaps, of all the organs in the body, the appendix varies most in its location; and the point of great-

est tenderness to pressure will be determined by the position which the appendix occupies. Thus, I have found this point in the gall bladder region when the gangrenous tip was pointed high up under the liver; in the right renal region, when the appendix was retrocaecal; and low down over the pubes in a case where the appendix was adherent to the bladder. It is especially important to remember the various locations of the appendix in children with abdominal disease, for this variability increases the difficulty of early diagnosis while at the same time early diagnosis and treatment are particularly important, because children have less resistance to infection and less omentum for protection against infection in the peritoneal cavity.

It may be remarked in passing, that if the tenderness is diffuse over the abdomen, the process of diagnosis must include the consideration of intestinal kinks, pericolic membranes and other complications.

The pain and tenderness are accompanied by rigidity of the abdominal muscles. This is usually marked in the lower portion of the recti and lateral abdominal muscles, but the muscles involved will depend somewhat on the location of the appendix, and the degree of rigidity will be influenced by the amount of parietal peritoneum involved, and by the nervous constitution of the patient.

Fever is generally present in some degree. Usually it is moderate, though it may be high and accompanied by a rigor. It is to be remembered, however, that continued fever is a sign of abscess formation or extension and that a sudden drop in the temperature may indicate a perforation, especially if accompanied by signs of shock, increasing pulse rate, and other symptoms of developing peritonitis. Otherwise, the pulse and temperature are not usually distinctive.

Leucocytosis is present and the differential count is necessary since it is the relative increase of the polynuclear leucocytes which is characteristic of infection. However, it is not safe to depend on the leucocyte alone as a measure either of the virulence of the infection or of the resistance of the patient.

In fact, the diagnosis of appendicitis should be made not on any one symptom alone, but only after a consideration of all the symptoms, **correlated with a careful history.** Failure to secure a careful his-

tory is probably responsible for more errors in diagnosis than any other fault. Since it is as regrettable to diagnose an appendicitis that is not present as it is to fail to do so when the disease is extant; and, since cases do occur in which anomalous symptoms will tax the ingenuity of the most skilful, each case should be measured, not only by what might be called the positive symptoms of appendicitis, but the process of diagnosis by exclusion must be employed also.

Briefly, the mental process should be something like this: Is it gall bladder trouble? If the patient is "fair, fat and forty," if the symptoms of gastric dyspepsia have been present, if the pain remains localized in the epigastrium or radiates to the shoulder or through to the back, if jaundice is or has been present, if muscular rigidity is present only in the upper part of the right rectus—then the disease probably has its origin in the gall bladder. Is it acute pancreatitis? Here again we must inquire for a history of gall bladder trouble which often precedes. Vomiting is often persistent and distention and symptoms of intestinal obstruction occur. The pain is epigastric, is agonizing in character, often radiates to the back, and is accompanied by symptoms of shock. Perforating ulcers of the stomach and duodenum are likewise accompanied by terrific pain and signs of shock. Muscular rigidity also occurs early, as do symptoms of beginning peritonitis.

Are the symptoms due to the disease in the kidney, ureter, or bladder? This is an important question and one it would seem not always answered correctly. In a recent paper, (3) Dr. John R. Caulk reported a series of cases up to 1916 of urinary stone (renal and ureteral) of which twenty-seven per cent had had appendectomy performed without relief! Even in the last five year period ten per cent of urinary stone cases reported by him had been subjected to removal of the appendix. Since the art of surgery is equally discredited by operations which are unproductive of good as by failure to perform them when they are indicated, we must use all the means available to make certain of the diagnosis. Briefly, in the differential diagnosis between diseases of the appendix and of the urinary organs, we should note carefully the onset and order of occurrence of the symptoms—in other words, i. e., get a careful history of the case. Generally, nausea and vomiting are less frequent in urinary disease, muscular rigidity and abdominal distention are

less marked, while chills and fever are often more pronounced. Leucocytosis is not so pronounced. The pain present in urinary disease often radiates to the bladder or perineum or external genitals. But all these symptoms should be supplemented by a careful and complete urinalysis and x-ray examination.

Only brief reference can be made here to the frequency with which we must differentiate between disease of the appendix and disease of the female pelvic organs. This subject requires a paper in itself, and I desire to call attention here, merely to the necessity of considering such diseases as salpingitis, ectopic pregnancy, paratrititis, and ovarian disease. A careful consideration of all the symptoms, a complete physical examination, and the obtaining of a full history should be our aim as essentials to a correct diagnosis and proper treatment.

In closing, may I add a few remarks as to my ideals of treatment of appendicitis? First: It should be an absolute fixed rule that every patient with acute pain in the abdomen should be confined to bed and be kept under observation. Since the severity of the pain varies so greatly this rule is often difficult of enforcement. The two rules, however, which are of most importance in the non-surgical treatment—if it can be properly said there is such a treatment—and the two rules which are most frequently violated and followed by the most disastrous results are these: **Withhold all food**, and next, **do not give purgatives**. Next to delay in operating, the administration of purgatives and the giving of foods are directly responsible for the largest share of fatalities in appendicitis. There is hardly a single acute abdominal condition which even resembles appendicitis which is not made worse by food and purgatives. Is it obstruction? Many a case of mild obstruction, both mechanical and paralytic, has been aggravated by food and purgatives causing the bowels to become still more active in peristalsis, more tightly constricted at the seat of obstruction, more dilated and oedematous, more paralytic, more toxic and lethal in their contents. Is it gall stones or gall bladder inflammation? There are indeed few men of experience who would counsel food when the primary symptom, aside from pain, is indigestion. Is it ulcer of stomach or bowel? Only an amateur in medicine would crowd food and infective material into a hollow organ with weakened, or perhaps perforated walls. It

is equally dangerous to give food and purgatives in practically every other form of acute abdominal infection, be it acute pancreatitis, Meckel's diverticulum, mesenteric thrombosis, salpingitis, ruptured ectopic pregnancy. The old method of giving morphine and opium to stop peristalsis was infinitely superior to the modern method of giving food and purgatives. Though opium can never replace operation, it is at least a life saving measure in that it assists nature in confining the infection to one circumscribed area—while purgatives and food tend to spread the deadly infection to wide areas of unprepared and unprotected peritoneum. Foods and purgatives are instruments of death in appendicitis. We need in every community new disciples of the Murphy-Ochsner treatment—and let us remember that the distinguished men whose names are applied to this form of treatment, emphasize especially the fact that it is recommended only for the late—the so-called neglected cases of appendicitis.

We practitioners need to be convinced of the truth of these statements, and we should exercise the courage of our convictions when our patients and their families fear the patient will starve if we withhold food temporarily or will suffer undefined misfortunes if the bowel action is delayed. Let us tell our patients, their family, and friends that temporary constipation is an effort on the part of nature to limit and throw off the danger—that food and purgatives in the presence of acute abdominal infections cripple and kill. Our mortality and morbidity rate will be tremendously lowered and our professional conscience will be vastly clearer.

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Read before the State Medical Association, May 1922.

**Discussion:** Dr. Horace Reed, Oklahoma City.

These papers are most timely. And such papers will continue to be of interest as long as, on the one hand, patients are being subjected to operations for something they do not have, or on the other, are permitted to die with acute appendicitis.

Dr. Long gives a review of the anatomy, embryology of the appendix, and also discusses appendicitis and appendiceal colic.

It is not necessary that we should try to learn something new about the cause of ap-

pendicitis, nor is it important that any new diagnostic signs be discovered. In about ninety per cent of the cases the diagnostic signs are so clear cut that he who runs may read. In the other ten per cent conditions are usually such that one can take time for observation. Either the symptoms are so mild justifying the doubt that appendicitis is the trouble under investigation, or the patient has passed to the other extreme before being seen by the physician, and the primary symptoms have become shrouded in the tragical signs of generalized peritonitis. In the first instance, surgery is not urgent, while in the second it is usually inadvisable.

For practical purposes I would reduce the quintet of symptoms as mentioned by Dr. Long to four (1) diffuse abdominal pain to be followed by (2) nausea, (3) fever, and (4) evidence of localization in the right lower quadrant with no extenuating circumstances, is justification enough for the removal of the appendix, and I am frank to say that with every facility for the prompt investigation of the leucocyte count, the report sometimes reaches us after the operation is already under way. No instance can be recalled in which waiting for the count would have changed our course of action. What I want to emphasize is that acute appendicitis can be diagnosed at the bedside without the aid of the microscope and should be so diagnosed by the family physician.

Do not misunderstand me to advise against thorough investigation. Far be it from me to give such an impression, nor do I wish to be classed as a sensationalist, but when we face a mortality of over ten per cent in a condition which should be and which can be made to be less than one per cent there is need of an awakening, and any means which would serve to bring about such an awakening would seem justifiable.

Dr. Risser's paper is an indictment of the profession. I wish that I were able to challenge his statement that the blame for the present mortality in appendicitis falls largely on the general practitioner. Procrastination in acute appendicitis is the thief of lives. Active catharsis is its handmaid.

**Discussion:** Dr. J. A. Gregoire, Drumright, Oklahoma.

Dr. Long's paper is very interesting to me. He first takes up the anatomy and the

embryology of the parts and once more brings old things anew to our minds. I believe the idea a commendable one. It will help us to a more comprehensive understanding of the subject.

The human system is a system of systems. It is quite impossible to have a lesion of one without sympathy of the others. We have vomiting in appendicitis, nothing wrong with the stomach, but a sympathy through the reflex system. We note carefully what various authors have to say by way of opinion, while we know opinions never establish a fact. I will admit many times we, at the incipency of a trouble, treat patients on opinion but we should not be satisfied until we have fully and completely diagnosed the case.

The word "disease" is applied to a structural change while "disorder" is restricted to a functional derangement. Since the function of the appendix is known, it is a little hard for me to understand what a deranged function would be. The doctor is trying to differentiate between what he calls appendiceal colic and appendicitis and gives two main reasons: absence of leucocytosis and lack of rigidity of the abdominal muscles. He should include absence of temperature. In the first place we can have a leucocytosis without any reference whatever to the appendix. Rigidity of muscles are often very slight in well marked cases of appendicitis, which we have later confirmed by operation. It is not reasonable to conclude because we have pain, no rigidity of muscles, absence of leucocytosis in the very incipency of the trouble, that we have no appendicitis. To my way of thinking we might have the conditions enumerated by the doctor upon which he diagnoses appendiceal colic and it be appendicitis.

The terminus of any trouble does not diagnose the case since in many cases we get resolution for the time being. A typical case will present all the symptoms common to that disease but we are forced under many circumstances to make a diagnosis without what would be a leading symptom in other cases. It seems to me that Dr. Long is trying to make a distinction without any material difference. For a diagnosis we should attach much importance to the history of the case. If one or two things are absent and others well pronounced it is better to err early in the case, operate, and give the patient a better chance of his life.

Now with reference to Dr. Risser's paper

I wish to say that I have had the pleasure on various occasions to hear papers read upon the subject of appendicitis. Also I have read after various authors, but at no time have I ever known this subject to be covered so completely as Dr. Risser has done in this paper. I can appreciate the importance that he emphasizes upon early diagnosis. Having done, and am still doing rural practice, I have the opportunity to see every now and then, that life has been sacrificed. Wherein the family physician has waited for the neighbors to help him make his diagnosis, and then the case was referred to the surgeon, too late for simple appendectomy. What would have been a simple appendectomy with no mortality, now becomes the treatment for purulent peritonitis of the severest type with a dreadfully high mortality and morbidity rate.

After studying this paper carefully, I am of the opinion that reprints thereof should be sent to every physician within the State and I emphasize here that it is worthy of careful study by every doctor within the State. If this were done, I feel confident that mortality in appendicitis will be materially lowered by this time next year.

I thank you.

#### ACUTE APPENDICITIS IN CHILDREN\*

MARVIN E. STOUT, M. D.

Oklahoma City, Okla.

The acute surgical problems of childhood are usually seen first by the pediatrician, second by the surgeon, and too frequently this consultation results in either the one or the other assuming the complete control of the case to the exclusion of the other, when to my mind there are no conditions in medicine that call for a closer relationship between the pediatrician and surgeon than do these problems of childhood. They are never wholly surgical or wholly medical. It has been my experience that pediatricians may be given to error by procrastinating too long in an effort to make a complete positive diagnosis before consulting a surgeon, but surgeons err much more frequently in assuming that a well delivered operation constitutes the whole of the treatment.

There are no class of cases that require a more carefully regulated diet, and more careful medicinal supervision than do children following a major surgical ordeal of

any nature. Children do not stand surgery as well as adults, they are more given to digestive disturbances, pneumonia, and all forms of post operative sequelae than are adults, but as important as this may be, early diagnosis and early surgery, when indicated, is even more essential, for acute surgical lesions develop more rapidly in children. They do not tolerate them as well. The early symptoms are more obscure, and they are more likely to be confused with some of the acute febrile conditions that are so much more common to children than adults.

Appendicitis is the most frequent, acute surgical problem that I have been called upon to operate for in children. It occurs at all ages. The youngest patient I have operated was eleven months old, which was a suppurative case, and gave a distinct history of typical attacks extending back to within two months of its birth. The appendix was ruptured at the time of operation, with free pus, and there were numerous old adhesions from previous attacks.

The number of case reports in children under a year of age are not very great, but the difficulty in diagnosis, and the prevailing opinion among the laity that "they are too young to have appendicitis" makes me think that there are a considerable number of cases that do not come to surgery. We have operated numerous cases in children two or three years old, and the literature is filled with reports of cases in children of this age.

#### Diagnosis

As proof that the diagnosis is more difficult to make, and is much more frequently overlooked, we have but to consult our own records which show that fully ninety per cent of the cases operated by us have been ruptured at the time of operation as against a reverse ratio in appendicitis in adults, and this does not represent any one man's work, as our cases are scattered over a wide area of the State, both in adults and children, and usually the diagnosis has been made before we see them.

The most common mistake which I have noticed in cases coming to us is that they have been treated for some of the acute digestive disturbances, frequently by the parents, and occasionally by the physician. Children are so given to "stomach ache" from the various digestive disturbances, and the over loadings which they indulge in, that this mistake seems almost excus-

\*Read in Section on Pediatrics and Obstetrics, 30th Annual Meeting, Oklahoma City, May 1, 1922.

able, but I have noticed that when they fall into the hands of a physician that systematically examines every case of "stomach ache," making a careful search for tender points, supplementing this with a blood count, instead of prescribing the proverbial dose of castor oil, there are not so many pus cases. If we spend less time inquiring what the child has eaten and more in hunting for tender points in the abdomen we will make better diagnoses.

Appendicitis is frequently mistaken for intussusception or some form of obstruction, but this is not a serious blunder since both conditions are surgical and the trouble is usually found at operation. The principal thing is to recognize that it is surgical and have it operated early, rather than to wait too long trying to make a positive differential diagnosis.

The only case that we have failed to find at operation, when this question was to be settled, was in a girl about eleven years of age who had the only distinct Lane's kink that I have seen in a child. This was overlooked at operation and upon continuation of the symptoms, she was re-operated thirty-six hours later, the band was released and the patient recovered after a desperate fight.

Right sided pyelitis is not so uncommon in children, and is also mistaken for appendicitis at times. Only recently, a case consulted us wherein this mistake had been made, which reminds us of the importance of routine urinalysis (microscopical) in all cases, and further renal study when indicated by the urinary findings.

At one time I mistook a sarcoma of the cecum for appendicitis, with a walled off abscess in a two year old child, but these are rare conditions that only occur once in a life time. However, the acute Bronchial infections that accompany the exanthemata, colds, etc., may be mistaken for appendicitis, and it is a common thing for a basal pneumonia or a diaphragmatic pleurisy to give all the signs of an advance appendicitis, or more commonly a peritonitis which may be attributed to the appendix (the appendix being responsible for ninety-five per cent of all peritonitis in children). This mistake is so common that no child should be operated until a careful examination of the chest has been made, and where there is the least element of doubt. This should be done by a pediatrician who is accustomed to making tactful examinations of children.

There is one thing to bear in mind, that all the symptoms are usually exaggerated in chest cases, including the blood count and the abdominal rigidity, and one other thing that is usually neglected, and that is an X-Ray of the chest, will frequently show a basal pneumonia before it can be detected by physical signs. Murphy laid down the classical symptoms of pain, tenderness, fever, nausea and leucocytosis, but fever, nausea and leucocytosis are not present at all times in every case, and even pain is not a constant factor. However, it is usually present and tenderness to deep pressure is practically always present, and it is seldom caused by anything else, so that I have come to rely on it as the most valuable aid in making a differential diagnosis. In children it often requires considerable tact and patience to elicit it, but one should never fail to be certain about local tenderness in every case of stomach ache. If we are very careful relative to this point alone it will save us from overlooking many unsuspected cases of appendicitis.

### Treatment

I have come to believe that every case of acute appendicitis, ruptured or unruptured, should be operated as soon as it is seen. This may not hold true for every case of diffuse peritonitis due to a ruptured appendix and there may be a few specific cases where the patient has traveled some distance to reach a surgeon, where it may be advisable to allow them a period of rest before operation, where the appendix is already ruptured, but, as a rule I believe the earlier they are operated the higher per cent of recoveries we will obtain. We are also removing a greater number of appendices at the primary operation than we have in the past, but in regard to this point each patient should be a law unto himself. Also the deftness of the operator enters into it as well as the condition found at operation. The more expert a surgeon becomes the higher percentage of appendices he can remove with safety, and the better his judgment becomes as to which can, and which cannot be removed with safety. Furthermore, a regular assistant, a highly trained anesthetist and a stationery sterile nurse facilitate the work of the surgeon and enables him to remove some that he would not otherwise undertake. Everything that lends to gentleness and rapidity, without undue haste adds to the chance of recovery, for children will not stand rough and long handling.

But as pediatricians you are not so interested in the technique as you are in the early diagnosis and management prior to operation and in this connection I must say that I am convinced that castor oil is responsible for more damage in acute appendicitis than any known factor. Do not give oil or any other purgative to any case of "stomach ache" until you are certain that it is not appendicitis.

Every time you are called to see a child with the "stomach ache" or "indigestion" set yourself the task to prove that it is not appendicitis before leaving it. If you cannot do this and feel you must have more time, withhold all purgatives, withhold all foods and everything else by mouth except small sips of hot water. Give him an enema if you like, place him in the Fowler position, and do not give narcotics to mask your symptoms until the diagnosis is made. Go back to see him every five or six hours and examine his abdomen carefully for tender points.

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**Discussion:** Dr. Eva Wells, Oklahoma City, Okla.

The essayist emphasized the fact that, acute surgical conditions are usually seen first by the Pediatrician. This is true, and we know that the Pediatrician or family Doctor must always be on his guard, when a child presents acute abdominal symptoms. There are two special peculiarities of appendicitis in children, namely the insidiousness of its onset, and the rapidity of its progress toward perforation, with the consequent production of peritonitis. It is these two factors which influence the mortality so unfavorably. The knowledge of these conditions should render the family doctor all the more anxious to call in surgical counsel. Early diagnosis is the keynote, and is not easy to make in a child, it usually requires a great deal of tact and patience on the part of the doctor. In many cases the symptoms of appendicitis in children, are like those in adults, presenting the familiar picture of abdominal pain, localized tenderness, muscular rigidity, fever and vomiting. This type we see in older children, but in younger children the clinical symptoms are very atypical and present the greatest difficulty in diagnosis.

Pain is indefinite and hard to recognize, sometimes it seems to be paroxysmal, coming on at intervals, with attacks of crying, it is not often referred to the right iliac region, but to different parts of the abdomen.

Tenderness on abdominal palpation is still more difficult to recognize than pain, as young children cannot aid the doctor in saying when palpation hurts them. He must judge by the facial expression and action of the patient. They often resist examination strenuously, and for this reason muscular rigidity is hard to determine, therefore mistakes are more often made in diagnosing appendicitis in children than in adults.

One writer states that Leucocytosis is the most constant symptom. In his series of several hundred cases, the average Leucocyte count was 17,400, with an average of eighty-two per cent polymorphynuclears, and if the patient showed a low leucocyte count with high polymorphynuclears, the prognosis was bad, on the other hand a high leucocyte count with high polymorphynuclear count, indicates a favorable outcome.

The principal conditions that may be confused with appendicitis in children are pneumonia, pyelitis, Potts disease, typhoid fever, and intestinal obstruction.

Pneumonia gives a higher Leucocyte count than appendicitis, so that is not a differential point, but a careful chest examination should be made in all cases. Rapid respiration, cough, flushed cheeks should suggest the chest as the probable seat of infection.

Pyelitis was especially referred to by our essayist. Inflammation of the pelvis of the kidney is particularly confusing when pus is found in the urine, in a suspected case of appendicitis. Pyelitis may exactly imitate appendicitis, but we know that blood, pus, and albumin may be found in the urine of a child suffering with acute appendicitis as a primary condition. If the illness is due to pyelitis alone the amount of pus is usually greater than when it complicates appendicitis.

Potts disease—There should be no confusion with Potts disease if the doctor makes a habit of examining the spine.

Typhoid Fever—In typhoid fever, pain is preceded by fever, headache, and general malaise for two or three days, whereas in

appendicitis it is the first symptom. Uncomplicated cases of typhoid fever will not have a high (above 10,000) leucocyte count.

**Acute Intestinal Obstruction**—The question may remain doubtful between acute obstruction and acute appendicitis, but that as our essayist has brought out, is of little clinical importance as either condition is an emergency surgical condition.

Early diagnosis and early operation offer the best hope for reducing the mortality in acute appendicitis. If prompt operation is recommended for adults it is much more important in children, because of its insidiousness, its rapid progress toward peritonitis, and the difficulty of diagnosis.

The essayist did well in pointing out to us, the harm that may be done by giving the proverbial dose of castor oil, instead of looking for tender spots in the abdomen

One surgeon states that in a series of nineteen cases of perforated appendices in children, sixteen had been given purgatives, either by the doctor or the the parents, and another series of four cases in which no purgative had been given and no appendix was perforated.

We are glad to note that the surgeon feels the need of the assistance of the Pediatrician on these cases, that after operation there are many points for the pediatrician to carry out, as the surgeon is not a pediatrician, certainly the pediatrician is not a surgeon, and by close co-operation of the two of us, we will be able to render greater service to the child.

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**Discussion:** Dr. B. A. Hayes, Oklahoma City, Okla.

Mr. Monahan, in a recent essay, states that no appendix ever ruptures unless the case is mishandled. That is, he says that the rupture is always produced by giving the patient catharsis or food; and that if all cases were treated simply by putting them to bed and withholding all food and drink by mouth, general peritonitis would be an unknown disease.

In this discussion I wish to call attention to a sign of value in the early diagnosis of appendicitis. Some years ago Mackenzie and Head worked out what is known as the viscerosensory reflex between the sympathetic nerves of the viscera and the sensory nerves of the skin. We know that

most cases of appendicitis start with an irritation of the mucosa which causes edema, shutting off of the circulation, and consequent gangrene. Now during the stage of irritation of the mucosa there is a marked hyperesthesia of the skin supplied by the right tenth thoracic nerve. This hyperesthesia disappears when the mucosa become gangrenous, because of the death of the nerve endings. Hence in many doubtful cases in children where we are hesitating whether it is simple "belly ache" or the early manifestation of acute appendicitis, the eliciting of this sign will stop us from administering a dose of castor oil which would be exceedingly harmful to the patient.

In a large series of cases in the University Hospital this sign was shown to be as accurate as any of the classical symptoms which are generally known. But it has the advantage of appearing long before rigidity or tenderness.

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**Discussion:** Dr. Stout, Oklahoma City.

I appreciate the liberal discussion, and let me say one word relative to a point Dr. Autry just made regarding the examination of children while they are asleep. This is well worth remembering.

Just lately Dr. Clifton of Norman, Oklahoma, who, by the way, is a very careful diagnostician, sent me a case, and he said, "Now doctor, you will not find very much when you examine this child, but I have slipped up on him when he was asleep two or three times, and there is considerable tenderness in the right side."

I have also found it a good idea to ask the mother to go over the child's abdomen when it is asleep, and when she is working with it and see if there is any difference in the sides. Often they can elicit findings in this way that we are unable to get. The child is more natural. They are on strained relations when the doctor is present.

My one object for writing this paper was to stimulate a closer study. Too many times we go out and take their temperature, look at their tongue, ask them what they have been eating, prescribe a purgative and go home, where, if we sat down by the bed and went over them, carefully examining their chests, palpating abdomens for tender points and took a blood count and a speci-

men of urine for a microscopic uranalysis we would not overlook so many acute appendices.

It is an appalling fact that ninety per cent of these cases go to rupture before they are operated. They are hard to diagnose it is true, which only means that we must study them closely. If we carry home but one thought from this paper, and that is to set ourselves the task of proving that they are not appendicitis before instituting treatment it will go a long way toward early surgery in these children.

I thank you.

### CARDIOSPASM\*

JAMES C. BRASWELL, M. D.  
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Cardiospasm is a condition in which there occurs a spastic contraction of the lower end of the esophagus near the cardia, with diffuse dilatation and maintenance of the normal contour of the gullet, accompanied by hypertrophy of the cardiac sphincter.

According to Smithies, the terms "spasm at the cardia" and "cardiospasm" are not synonymous. The latter affection includes hypertrophy of the cardiac sphincter or of the wall of the lower portion of the esophagus, combined with general dilatation of the esophagus. "Spasm at the cardia" is a transient condition not associated with general dilatation, and does not produce permanent esophageal dilatation. Jackson has proposed to drop the term cardiospasm and call the affection "hiatal esophagismus."

In 1878, Zenker and von Ziemssen reported the first series of cases of idiopathic dilatation of the esophagus. Their findings were based chiefly on postmortem records. In this country valuable contributions have been made by Dunham, Meyer, Mixter, Plummer, Sippy, Smithies, and others.

Numerous theories have been advanced concerning the etiology, however, as yet, none have been accepted. Plummer, following Mikulicz and Meltzer, is inclined to think that there is some disturbance of the nerve-muscle mechanism of the esophagus, which may produce diffuse dilatation of the esophagus irrespective of the stenosis due

to hypertrophy of the cardiac sphincter. cases of cardiospasm, but the hypothesis Intra-abdominal lesions may be present in that they are the causative factor in the production of the affection remains unproven in the study of a large series of cases.

Cardiospasm is not a common affection, yet it occurs more frequently than is mentioned in the text-books. If it were possible for the profession to become more familiar with this condition, many patients suffering from severe discomfort might be relieved. The object of this paper is to present the chief diagnostic signs of cardiospasm, illustrated by a typical case.

In the study of 301 cases of cardiospasm, Plummer and Vinson found the affection most frequent between the ages of 31 to 40 years; the youngest being five years, and the oldest 83. The affection was slightly more common in males. The duration of the symptoms varies from two months to 40 years.

**Symptoms:** The symptoms may be divided according to the stage or progress of the affection. The first attack of cardiospasm usually occurs suddenly, and a choking sensation is felt at some point in the esophagus. A sensation of fulness or tension behind the sternum is quite common. The food seems to stick and liquids cause as much difficulty as solids. Due to marked dysphagia nutritional disturbances may be so great that emaciation is pronounced.

Regurgitation frequently follows the injection of food or it may be delayed for hours. This depends upon the amount of food taken and upon the dilatation of the esophagus. The vomitus may be so copious at night as to prevent rest. The food regurgitated usually appears as ropy mucus or as food unchanged by digestion. Regurgitation is not accompanied by severe straining and stretching, and the average patient describes the condition as "spitting up food."

Coughing and choking sensations are often associated with regurgitation. After the esophagus has become well dilated, the choking sensation may be absent and the food taken at this time may be partially retained until the sac is filled. After filling the sac, further food is regurgitated or passed into the stomach. Liquids may filter through and pass into the stomach. The sac is never completely empty, and it is not

\*Read before the Tulsa County Medical Society, March 27, 1922.

uncommon to withdraw large amounts of food after a fast of forty-eight hours.

Pain occurs in approximately fifty per cent of the cases and varies from mild attacks to the severe type which may require hypodermic injections to control. Severe pain is not uncommon following forcible dilatation of the esophagus.

**Diagnosis:** The diagnosis of cardiospasm requires very careful study, however, the majority of cases present such clear cut, concise symptoms that the diagnosis is easily made by one who is familiar with the affection.

Dysphagia occurring at any age over a long period, associated with gradually increasing symptoms, should suggest cardiospasm. Little if any obstruction is noticed in passing a large olive. Liquids seem to cause as much difficulty in swallowing as solids. The roentgen examination is of great aid in the diagnosis, but the evidence which it furnishes should not be considered infallible. Carman thinks the blunt or regularly conical obstruction at or near the cardia and secondary dilatation of the esophagus are the chief characteristics of cardiospasm. Fluoroscopic observation and plate studies carefully considered with the clinical findings makes the diagnosis relatively easy.

An esophagosopic examination is unnecessary, and the information obtained by such an examination frequently proves to be of little if any value.

Cardiospasm must be differentiated from any lesion causing esophageal obstruction. Carcinoma usually occurs after the age of 40, and the stricture is tense and does not give. The stenosis in carcinoma is practically always above the diaphragmatic opening. In benign stricture the history of swallowing some caustic or lye should be carefully investigated.

**Treatment:** Various forms of treatment have been used in the management of cases of cardiospasm among which drugs and diets have little value. Operations have been advised by some authors, however, the end results are by no means satisfactory. The treatment of choice is forcible dilatation of the cardia.

Following The work of Russel, Plummer perfected a dilator which is operated by water pressure. In order to prevent trauma to the esophageal wall,

Plummer, after the technique described by Dunham, has the patient swallow a silk thread which acts as a guide to the dilator. A water pressure of 28 to 30 feet is usually required to dilate the stricture sufficiently. It is not an uncommon occurrence to have the dilator slip into the stomach beyond the stricture or upward into the esophagus. The poor results obtained in many cases following the use of the hydrostatic dilator can be attributed to such an error. In order to overcome this, the dilator is passed into the stomach. It is then distended and pulled forcibly up against the cardia. The water pressure is relaxed and the proximal end of the dilator is allowed to slip back into the esophagus. The water pressure is then rapidly renewed and the cardia is easily dilated. By this method approximately 75 per cent of the cases can be cured by one dilatation. The remaining 30 per cent require from two to five dilatations before the affection is completely cured.

**Report of Case:** Mr. J. E. C., a clerk, aged 32, came for examination January 10. Chief complaint, dysphagia and regurgitation of food.

About two years ago the patient suddenly noticed difficulty in swallowing cold water, which difficulty was repeated at intervals of a few days or weeks during the next six months. The dysphagia gradually became worse. This was followed by regurgitation which increased in severity. The food came up without effort and was not sour. Food frequently ran from the nose during the night. At the time of examination he was unable to swallow liquids or solids without regurgitating the majority of the food. The patient had very little pain at any time. The patient has lost 25 pounds during the past two years.

Physical examination was negative other than the emaciation. The systolic blood pressure was 30, the diastolic 80, the urinalysis was negative. Food withdrawn from the stomach was acid in reaction.

Roentgenologic findings were those of a typical cardiospasm.

A French olive size 45, was passed without any marked obstruction. The patient was dilated by means of the hydrostatic dilator, with 28 feet water pressure. The following day he was able to eat any type

of food and experienced no discomfort. Recent reports state that the patient is able to carry on his usual line of work and remains free of any discomfort.

**Conclusion:** In the treatment of cardiospasm drugs are without value. The chief symptoms are dysphagia and regurgitation. The affection can be cured by forcible dilatation of the cardia.

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#### \*BONE MANIFESTATIONS IN EARLY SYPHILIS.

CHARLES B. TAYLOR, M. D.  
Oklahoma City, Okla.

**Case Report:** Mrs. C. age 21, married. Reported for examination Dec. 1, 1921. Family history irrelevant as regards present illness. Conjugal history: Husband was being treated for syphilis at time of marriage. She is about two months pregnant. She reports that about three weeks ago a small painless, sore appeared on tongue. This was followed in a few days by a painless swelling under the jaw.

Examination shows a well developed,

fairly well nourished white woman in apparently good health. On the right margin of the tongue is a hard indurated chancre the size of a nickel. The right sub-maxillary gland is enlarged to the size of a lemon. They are both painless and cause but little inconvenience. Examination for the *Spirochaeta Pallida*, and the Wassermann were both positive. The patient's weight is 110 pounds.

Treatment was instituted Dec. 1, 1921. Neo-Arsphenamine .6 gms. being given once a week, and bichloride of mercury, one grain, twice a week by deep intramuscular injection. By the third week the chancre and its satellite bubo had disappeared. Eight doses of Neo-Arsphenamine were given. Then, because of local irritation, cyanide of mercury was substituted for the bichloride. The last dose of arsenic was given Jan. 19, 1922. The mercury was continued. On Feb. 16, 1922, she called attention to the fact that the bones of her legs and forearms were quite painful. The pain was so severe at night that she could not sleep. Examination revealed that both tibiae and ulnae were exquisitely painful to the touch. It also disclosed an exostosis near the distal end of each bone. On Feb. 17, Neo-Arsphenamine .6 gms. was given, and the mercury continued in larger doses. Within three days the pain was gone, and the exostoses disappeared in ten days. Six additional doses of Neo-Arsphenamine were given at weekly intervals.

So many possibilities for discussion are opened up by a case of this kind that it will be necessary to limit my paper strictly to one phase. The question of extragenital chancres is a rich field. The question of malignant syphilis is at once brought to mind. The question of the treatment in this particular case offers much ground for argument. The influence of syphilis on pregnancy, and the influence of pregnancy on syphilis would fill a volume. I intend at this time to limit my observations to the bone manifestations.

Involvement of the bones in early syphilis is very common, and it is in such involvement that we have one great exception to the general rule that the early syphilitic manifestations are not painful. The single characteristic feature of early bone involvement in syphilis is pain, and the pain is so acute that it has been arbitrarily named syphilitic rheumatism. Just as rheumatism is a confusing term, so is syphilitic rheumatism a comprehensive term, meaning in-

\*Read before the Section of Urology and Skin Diseases, Oklahoma State Medical Society, Oklahoma City, May 9, 1922.

involvement of the bones, joints, muscles and aponeuroses. Another name which is more accurate and which describes all the pain is osteocopic.

The involvement occurs as:

1. Ostealgia, or simple pain.
2. Periostitis.
3. Periostosis, or exostosis.

\*. Ostealgia conveys the essential idea that there is no distinct pathology that can be demonstrated. A large number of patients say that they have pain in the bones. If they are examined most carefully no palpable or visible lesions can be found. Careful examination of the long bones will usually reveal a single very small point where the pain is exquisite. This point may be very small. The patient can not tell where the pain is until the place is touched. The pathology of the lesion is not definitely known. It is probably due to the pressure of an endarteritic vein or artery on a nerve entering the periosteum. This type of pain is common and occurs with a predilection for three areas, giving rise to three names for the condition.

(a) Cephalalgia: This means headache, which in a syphilitic may be due to several things. First, to an encephalitis. Second, to ostealgia of the cranial bones. This pain is usually elicited by combing the hair. It may be due to an exostosis or periostitis.

(b) Sternalgia: With this condition patients report a sensation of weight in the chest, or it hurts to breathe, or there is precordial distress. A sensitive point over the sternum may be found.

(c) Pleurodynia: This is pain in the ribs. Next to cephalalgia this is the most important. It is often mistaken for pleurisy or herpes zoster. The characteristic features of these painful spots are that they ache spontaneously and are worse at night. It is probably the heat generated by lying under the bedclothes that brings on these nocturnal exacerbations.

(2) Periostitis: This occurs most frequently in the young, usually in the more severe types. Careful palpation of the bones of which the patient is complaining will reveal a little enlargement which feels like a fibroma. It is very painful to pressure. Such lesions may be single or multiple, and when found are usually on the long bones, particularly those subject to trauma, the tibia, clavicle and ribs. A par-

ticular form occurs on the bones of the cranium, the two sites of predilection being the supra-orbital and frontal regions. They are usually innocent until pressed on.

(3) Exostoses: This is a more severe form with a mild degree of organization. The symptoms are the same as in periostitis. It is perhaps more common in women than in men. These are apt to appear at the bony prominences such as the tuberosities of the tibia, the acromion, the olecranon, etc. More particularly do we find this condition in the so-called malignant type of syphilis. We find the same degree of sensitiveness, both spontaneously and elicited by pressure, with nocturnal exacerbations.

These bone conditions will often persist for a long time as the sole manifestations of the disease when it is untreated. The patient usually comes to the doctor complaining of rheumatism. It is easy, (and this frequently happens), to give the patient a prescription for one of the salicylates, and send him away without having made a thorough examination.

Without treatment these conditions will disappear slowly. While under appropriate treatment they will disappear almost like magic. Should the exostosis be allowed to organize it will persist for a long time. The conditions from which it must be differentiated are neoplasms, infiltrates, periosteal bruises and hematomata. The diagnosis is made by the particular type of pain.

The joints are affected in exactly the same way as are the bones. The pain in the joint may be idiopathic, or there may be demonstrable pathology. There is no heat or swelling in a syphilitic joint. Occasionally there is some crackling, usually more or less pain which is nocturnal. The joints most commonly involved are the knee, ankle, wrist and elbow. They are, as a rule, not painful during the day, but keep the patient up most of the night.

Hydrarthrosis, which is a more pronounced affection, may be unilateral, but is usually bilateral. There is never a great deal of effusion, and it is a cold swelling. The pain is not great, but there is nocturnal exacerbation.

The joints most affected are the knees.

Differential diagnosis. Gonorrheal arthritis has a predilection for the small joints, the fingers, toes, the temperoman-

dibular and the spinal column. It is hot, reddened and inflamed. The syphilitic joint is cold and not reddened. Both are poly-articular. With gonorrhea there are constitutional disturbances with severe chills and fever. In syphilis the constitutional disturbances are slight, and fever may be absent. One has a tendency to suppurate and result in a permanent fixation of the joint, with functional disability. The other rarely results in functional disability.

From tuberculosis, the diagnosis is easy. They are alike in that both are cold joints. In tuberculosis destruction always takes place. There is erosion of bone, and chronicity which is not characteristic of syphilis. There is a tendency for a tuberculous sinus to form. With tuberculosis there is, of course, pain. But it is a different kind of pain and it does not have nocturnal exacerbations. It contains pus even though it is a cold joint. Usually it is unilateral.

From a simple injury the diagnosis is easy. There is the history of injury. One joint is affected. The pain usually greater, does not get worse at night.

Synovial Membranes: These offer more difficulty in diagnosis. They are usually involved early, and there is an effusion of fluid. The sites of predilection are the toes and fingers. The condition resembles ganglion. It comes on rapidly and is benign. The same condition in gonorrhea is red, purulent, contains pus, and is very painful.

Bursitis occurs particularly over the malleoli and the sub-acromial bursae.

#### PROCEEDINGS OF THE UNIVERSITY HOSPITAL CLINICAL SOCIETY.

DR. A. B. CHASE,  
Oklahoma City, Okla.  
November 18, 1922.

A Case of Cardiac Valvular Disease. Patient, white male, age 27, unmarried, occupation farmer. Family history, negative.

Past History: In early life had measles, mumps, small pox, scarlet fever, typhoid fever, malaria and pneumonia. February 1917 had tonsils removed following an attack of rheumatism which involved the muscles but not the joints. General health good up until onset of present trouble.

Onset: Had influenza September, 1918.

This was followed by pneumonia with pleuritic effusion. He gradually improved, but has never been able to do work of any kind since.

Denies venereal infection.

January 22, 1921 was admitted to University Hospital complaining of sub-sternal pain smothering spells, orthopnea, oedema of feet and legs.

Records made at that time reveal the following:

Heart enlarged one finger breadth to right of sternum. Heart enlarged two fingers' breadth to left of sternum. Location of apex beat and P. M. I. not stated. Blood pressure 134-40. Pulse 88. Systolic murmur heard at apex. Aortic area widened. Temperature ranged from 98.6 to 99 degrees Fahrenheit. Nothing abnormal noted in urine or blood examination. Wassermann negative.

January 31, 1922, patient left hospital with notation "oedema of feet and legs gone. Orthopnea still present."

October 30, 1922. This patient was admitted to my service in the University Hospital.

Chief complaints:

1. Pain in chest, sub-sternal radiating into both shoulders, not increased by walking. Pain compels patient to sit upright in bed or in a chair. Pain almost constant but does not inhibit voluntary movements, nor does it transfix the patient. No sense of constriction within chest, no sensation of impending death. Pain does not shoot down arms.

2. Smothering spells upon attempting to lie down.

3. Moderate oedema of feet when patient does not stay in bed. Patient states these are the same symptoms he had upon previous entrance to hospital January 22, 1921.

Physical examination:

Lungs negative except few fine moist rales at bases of lungs, disappearing upon deep inspirations.

Heart: P. M. I. Fifth space five c. m. to left of sternum. Apex: Fifth space 12 c. m. to left of sternum.

No thrills present.

Dullness from second to fourth inter-spaces four c. m. to right of sternum. Pressure on this area causes sub-sternal pain

radiating to both shoulders. Aortic dullness eight c. m. wide.

Auscultation:

1. Systolic murmur at apex not transmitted.

2. Diastolic murmur supplanting second sound over aortic valves transmitted to left nipple.

3. No Pre-systolic rumble. Third heart sound not heard.

4. No dullness at left apex of lung.

Blood vessels:

Subclavian arteries visible pulsating.

Pulsating carotids. Capillary pulse present. Also corrigan pulse. Pulse rate 80 regular.

Blood pressure:

In sitting position brachial blood pressure 135-15. Notwithstanding the sub-sternal pain resulting, the patient was put in a horizontal position. The following was obtained:

Femoral artery 165-0 brachial 140-10. Pistol shot was heard in the brachial and femoral arteries. Duroziez sign was present in the femoral. Electro cardiogram negative. Wassermann negative. Urine negative. White blood count 8,500, polys 72 per cent. Temperature 98.6. X-ray shows fusion dilatation of ascending aorta. Blood culture not permitted by Veterans Bureau.

### DIAGNOSIS.

(1) Aortitis. (2) Aortic Insufficiency. (3) Relative Mitral Insufficiency due to cardiac decompensation.

**Diagnosis of aortitis** based upon (1) Sub-sternal pain of a characteristic type increased by pressure on the aorta. (2) Widening of the aorta. (3) Visible supraclavicular pulsations of both subclavian arteries. (4) Roengen findings. (5) Dyspnoea.

**Diagnosis of Aortic Insufficiency** based upon Circulatory findings, namely (a) Corrigan pulse (b) capillary pulse (c) pulsating carotids (d) blood pressure findings (e) Duroziez sign.

(2) Cardiac signs: diastolic murmur taking place of the second heart sound heard over aortic and valve area and transmitted in the usual direction.

**Diagnosis of Relative Mitral Insufficiency:** Signs and symptoms of cardiac decompensation with a systolic murmur heard at apex.

**Discussion:** Dr. Lea Riely.

To visualize the points in the case, I might call attention to the following features:

(1) This man had rheumatism in 1917 and subsequently had his tonsils removed.

(2) He had an attack of influenzal pneumonia with pleuritic effusion in 1918 followed by a slow convalescence and final discharge from the army because of physical disabilities

(3) He was admitted again this year because of orthopnoea, breathlessness, edema of the legs, cough, temperature running between 98 and 100 daily. He has a negative Wassermann, loud diastolic murmur and faint systolic murmur, apex beat in 5th space inside nipple line with diffuse precordial pulsation, decided Corrigan pulse, B. P. 135 over 15 on the arm, B. P. on leg 165-0, capillary pulsation in the matrix of the nail and at lip on pressing slide over the mucus membrane, facies not distinctly of either the aortic or mitral type. Marked hyperaesthesia over entire precordium and pains in both shoulders. The broad space elicited by percussion over heart and aorta.

According to Albutt's theory of angina pectoris, we would think of a dilatation of the aorta or an aortitis.

The distinction between aortic regurgitation and mitral stenosis with this decompensated heart and numerous murmurs would be hard to place since the timing are so near together and sounds so similar between a Flint and Graham Steele murmurs. The marked amplitude in blood pressure, Corrigan pulse and capillary pulsation would speak for aortic regurgitation while the rheumatic infection followed by an acute influenzal pneumonia with diffuse precordial pulsation and a dilated rather than a hypertrophied heart with murmurs at mitral area would argue for mitral involvement.

Since subacute bacterial endocarditis is always preceded by a diseased endocardium and rheumatism is evidently the precursor of these events and that it has a predilection for the mitral valves I would think it is a progressive affair in which the aortic valves are involved by extension and trauma from the aortic cusp of the mitral valve to the semilunar valves of the aortic.

This seemingly inconsistent process is due to the aneurismal ballooning of the aortic

cuspid of the mitral valve in many cases of subacute bacterial endocarditis. This was beautifully shown in a postmortem I recently saw and Murray showed numerous examples of this at the American College of Physicians in Minneapolis last April.

I feel that we are dealing with a low grade endocarditis which has gradually involved all the valves or at least the mitral and aortic valves since the tricuspid valves are so seldom involved, and the original valves involved were the mitral and the extension by contiguity of structures has involved the aortic leaflets.

The low white count, 8,500, polys 72 per cent, does not show an acute infection but does not negative a chronic one. A blood culture may show up the organism responsible for the trouble.

Dr. Leila Andrews: There is some similarity in this case with a case treated in this Hospital suffering with aortitis and aortic regurgitation. That patient had attacks of angina. He had a negative Wassermann but after full doses of K. I. for a period of few weeks his blood showed positive Wassermann and likewise positive spinal fluid. I would like to ask whether there has been K. I. medication and subsequently a Wassermann in this case.

Dr. C. J. Fishman: The history of an acute infectious process followed by the signs of heart weakness, namely, shortness of breath, swelling, cough, and intermittent temperature, with the physical findings of the organic heart lesion, speaks definitely for an acute or sub-acute endocarditis.

Whether or not, this particular patient had any of the involvements of the mitral lesion, as was thought at the time of this previous admission to the Hospital, is questionable upon the basis of the absence of fullness or widening in the left auricular region. However, there is no question about the presence of an aortic insufficiency, of which he has all the characteristic associated findings.

I wish to emphasize that in the diagnosis of organic heart disease, the associated findings, such as the nature of the pulse, the findings in the blood vessels, the size and shape of the heart, are more important in deciding the diagnosis than the auscultatory findings. Because of the heart picture at the present time, I doubt whether there was any mitral lesion. If it was present however it was so slight as to have been

completely compensated. I can not agree that the valvular diseases of the heart, result from contiguous infection. In fact, the heart lesions are always upon a basis of hematogenous infection through one of the branches of the coronary arteries.

Depending upon whether the organisms injure the base or the edge of the valve, the result is either a stenosis on the one hand, just as rust on a door hinge would impede the opening of the door. On the other hand, if the injury is at the edge of the valve, the result is an insufficiency. Realizing that the blood supply is not carried through the valve, the infection is carried through the lymph supply, just as nourishment is carried there.

Personally I can not conceive how infection can land through the heart circulation, and localize, and remain to injure the valves owing to the continuous and especially intermittent pressure within the heart itself.

Dr. L. A. Turley: The lesions of the heart valve due to direct action of bacteria begin either near the edge or its midportion rather than near the base of the valve. Occasionally we do see lesions starting apparently at the base. The vessels of the mitral valve are confined to the base region only, there being none in the middle or near the edge at the site where the lesions are the most common. There are no vessels in the aortic valve. We must remember that the heart valves come together on closing with a slap and in cases where there is a toxemia or similar condition present the tissues of the valve would undergo sufficient degeneration for the closing slap to result in enough trauma to roughen the surface of the valve sufficiently to allow ample opportunity for the lodgment of bacteria. In normal hearts the mitral valve and the mitral cusp of the semilunar do not hit together during their functional activity.

The important point in the consideration of this case is not what valves are involved, but to determine the etiological factor so as to institute proper treatment and arrest future progress of the lesions present.

Serious damage to the heart is generally the result of rheumatic infections or syphilis.

Rheumatic infections are generally one of the following:

1. Acute rheumatic fever.
2. Infected tonsils.
3. Myositis joint and bone pains, associated with sore throat.
4. Chorea.

These show a predilection for the mitral valves and are the common causes of mitral stenoses.

Less common causes of cardiac damage are: 1. Septi caemia. 2. Smallpox. 3. Scarlet Fever. 4. Typhoid Fever. 5. Influenza. When these infections attack the aorta an acute aortitis is the result, but they leave no permanent enlargement of the aorta. Syphilis, on the other hand, attacks the aorta especially the ascending portion, the aortic valves, and enlarges the aortic ring. Warthin states that syphilis does not attack the coronary arteries, while Hirschfelder states that syphilis of the myocardium with relaxation of the mitral ring is a frequent complication of specific aortitis and aortic regurgitation. Syphilis, once it attacks the aorta, causes permanent enlargement of that blood vessel. In regard to the Wassermann in specific aortitis: Many authorities state that it is not uncommon to obtain a negative Wassermann. The margin of error may be as high as 40 per cent. One goes so far as to state that it is not worth while to do a spinal fluid Wassermann.

While we regret the absence of more data concerning the heart and blood vessels in records made in January 1921, the blood pressure then noted 135-40 (radial) makes us feel that aortic regurgitation was present at that time. Also the changes in the blood pressure which have taken place from that time to date, 10-17-22. 135-15 (radial) convinces us that the aortic lesion is progressive. The point of origin is probably in the aorta. This assumption is based upon the fact that the presence of an aortitis was noted in 1921 and is present at this time.

The permanent enlargement of the aorta, combined with evidences of progressive aortic involvement, notwithstanding the negative Wassermann, points to syphilis as the etiological factor.

Mitral stenosis can be excluded for the following reasons: 1. Absence of presystolic murmur and thrill. 2. Absence of slapping sounds in the mitral and pulmonic areas. 3. Circulatory findings already given. 4. Presence of wide pulse pressure. 5. Diastolic murmur replacing second aortic sound.

The absence of progressive changes in the mitral area would be evidence against a sub-acute bacterial endocarditis originating in or about the mitral, progressing to and involving the aortic valves. The oedema of the legs and the sensation of smothering

noted upon entering the hospital are absent at this time. They were probably due to an impairment of the rest reserve of the heart. The sub-sternal pain radiating to both shoulders is probably due to the aortitis present. The fact that pressure on the aorta aggravates the pain, helps to confirm the diagnosis of aortitis.

There is nothing in the character of the pain, past or present, to suggest angina pectoris, and were angina pectoris present, it would not of necessity be due to the aortitis present.

The important points for consideration are:

1. Its etiology and its relation to treatment.
2. The necessity of careful study of the peripheral circulation as well as of the heart.

Note: Date 12-1-22 orthopnoea sub-sternal pain have disappeared. Anti-syphilitic treatment was instituted 11-10-22.

#### PROCEEDINGS OF THE OKLAHOMA CITY CLINIC "ROUND TABLE" —WESLEY HOSPITAL

DR. W. W. RUCKS,  
Oklahoma City.

I wish to call to your attention, some new factors in the history and symptoms of Mrs....., case No. 7995.

This lady has been seen by several members of the clinic and was once operated by Dr. Stout. In fact, she has had a number of operations, five in all. The first, by Dr. Ochsner, which was when she was twelve years old, appendectomy and cholecystostomy with removal of stones—which is quite young for gall stones, though Kerly reports removal of gall stones in a girl six years old. At the age of fifteen, she had a tonsillectomy and adenoidectomy. The third was for uterine polypi and the fourth was done in Arizona, the exact nature of which I do not know. The fifth was done by Dr. Stout and was a shortening of the round ligaments. His operative notes state that the gall bladder is thin, compressible, anchored to abdominal wall, considerable adhesions, and that there were no adhesions incurred from appendectomy, except a few binding the omentum to caecum.

The patient is a married woman 23 years old. Her mother and husband with both

of whom she lives, have tuberculosis. A brother has a stomach ulcer. Otherwise her family history is negative.

In her personal history, she had, during childhood, measles, mumps, diphtheria and scarlet fever. The scarlet fever was complicated by otitis media, which may also have been the infection responsible for the formation of gall stones at such an early period of her life. "Flu" is the only other illness except the operations mentioned.

The thing which is concerning her now and also her family, is her mental state. She and her mother stated to me that she had "nervous attacks," which are manifested by crying spells, fits of temper, which at times are uncontrollable, in which she threatens and attempts bodily harm to others, especially members of her family. When she was sixteen years old, a heavy bell fell on her head, making quite a scalp wound, the scar of which is now visible over the posterior part of frontal bone. After this, she had headaches, which she had not had before. At nineteen, she was thrown from a vehicle, lighting on her buttox, also sustaining a contusion of head. Following this she was unconscious for several hours and her headaches became much worse.

The "Nervous Attacks" she says begun after this injury, and have gradually become more frequent. If she is crossed, she is apt to have an attack. Again she says she may be writing and suddenly the page will be blurred. She is confused and if any way crossed during the next half hour, will manifest ungovernable temper. At times preceding an attack, she has ringing in her ears and at others, flashes of light before her eyes. A few days ago in a fit of anger, she cut off her hair. Her excuse was that as a boy she could be more apt to get work.

Her people are much concerned about her and justly so. There is no history obtainable of convulsive attack. Nor yet can it be definitely diagnosed as *petite mal*. But in my opinion it belongs to that rather large class designated as *Epileptic Equivalent*.

These cases are often misjudged and classed as perverse and disagreeable personalities, or hysterics—when as a fact all the basic conditions are present which make up an epileptic personality, and I think we can, therefore, justly diagnose this case as *Epileptic Equivalent*.

## A CASE OF FOREIGN BODY (CHEWING GUM) IN BLADDER—REMOVED BY LITHOTRITE

DR. JOHN C. MRAZ,  
Oklahoma City

Case No. 8639. Male, age 32. **Family and Personal History** negative.

**Present Trouble.** For past two years has had occasional frequent painful urination with stoppage of stream. These symptoms have gradually grown worse in past few weeks and added symptoms are soreness over pubes and occasional terminal hematuria.

**Physical Examination.** Negative in every respect except for moderate tenderness to pressure in hypogastrium.

**Cystoscopy.** A faint sensation is noticeable on introducing cystoscope, as though some object had been pushed aside as cystoscope entered the bladder. Upon filling and illuminating the bladder an object is plainly discernible, lying free in the bladder, brownish in color and about the size and shape of a large olive.

**Diagnosis.** Bladder stone.

**Treatment.** As the stone lay free in the bladder and was not very large, an attempt to crush and remove it with a lithotrite was decided upon.

Under N. O. & Ox. anesthesia, the lithotrite was introduced, jaws separated, the stone caught between them and crushed. To my surprise, instead of the usual crunching sensation imparted to the hands on crushing a stone, there was a faint crackling and then a sensation as of something soft packing between the jaws of the lithotrite. The possibility of catching and crushing the bladder wall was thought of, but this was improbable, as the bladder had been filled with water.

This peculiar sensation was explained when, upon removal of the lithotrite, a large wad of gum was found between its jaws. A thin calcareous shell had formed over the gum and many pieces of this were found clinging to its surface.

The remaining pieces were washed out through the evacuator and the patient obtained immediate relief from his symptoms.

Later, the patient satisfactorily explained the presence of the gum in his bladder.

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### EDITORIAL

#### POLITICAL MEDICAL TINKERING

A recent issue of the Journal, A. M. A., under the section devoted to "State News" carried the information that Dr. J. C. Mahr, Oklahoma City, has been appointed Superintendent of the Norman State Hospital, vice Dr. D. W. Griffin, resigned. The item was promptly repudiated by Dr. Mahr, who made the statement that he was not an applicant for the place, that Dr. Griffin had rendered the State highly satisfactory service and should be retained, so long as he felt inclined to continue in that capacity. Inquiries as to authority for the publication, made to the Chicago office, A. M. A., elicited reply and clipping from the "Guthrie

Leader," which, substantially made the same statement.

The entire matter smells of a crude attempt to muddle what is already a complicated situation, muddle it with untruths and pettiness. Everyone even slightly conversant with the conduct of our State Hospitals, knows that they have been conducted with the maximum of efficiency and skill when the meagre appropriations allowed for their operation is considered. Just why any man having behind him years of skill, fine repute and ability to perform his task should have to bother about reappointment passes human belief. One thing may be said with certainty as to this situation and that is that any man, clique or party attempting to make political shuttle cocks of our State Institutions will suffer the consequences of such foolishness almost before they attempt the execution of their destructive plans. In the main the personnel of our State Institutions has been far above the average for years, graft and favoritism have been practically unknown, so the system permitting this state of affairs to be should be left undisturbed.

#### Editorial Notes—Personal and General

Drs. L. S. Willour and T. H. McCarley, McAlester, announce the dissolution of their partnership, effective January 1.

Dr. C. S. Summers, Tulsa, addressed the Civitan Club of his city December 12. The subject being "The Mental Capacities of the Human Race."

Dr. E. M. Miller, Buffalo, who has been confined several weeks in a Wichita hospital on account of illness, has returned to his home greatly improved.

Dr. C. E. Barker, Oklahoma City, was held up and robbed while answering a call December 18. He lost \$150 in cash, a Masonic emblem, and a diamond stud. One of the robbers knocked him in the head with a gun rendering him unconscious.

Dr. L. A. Mitchell, Frederick, was elected Commander of his American Legion post in December.

Dr. L. H. Hill, Idabel, has moved to Colorado Springs where he will make his future home.

Dr. L. W. Trout, Afton, lost \$240 in money, a hypodermic and some narcotics when his office was robbed Christmas eve.

Dr. C. K. Logan, Hominy, received painful cuts when his car turned over December 22.

Dr. Walter Hardy, Ardmore, has filed suit against Carter County for more than \$17,000 alleging that to be due him for treating County patients.

Dr. J. B. Hix, Altus, spent several weeks in the North on account of illness in November and December.

Pontotoc County Medical Society was entertained with an oyster supper by the President, Dr. Sam McKeel, Ada, January 2. The mental tabulum was offered by Dr. M. L. Lewis who read a paper on Disease of the Stomach.

Mrs. J. Winter Brown, Tulsa, wife of Dr. J. Winter Brown, who is slowly convalescing in Boston from a serious operation, has been appointed Superintendent of the County Farm for Tulsa County.

Dr. Fred Y. Cronk, Tulsa, has been appointed General Chairman of committees for the Annual meeting to be held in that city May 15, 16, 17.

#### DOCTOR JESSE RAYMOND BURDICK

Dr. J. Raymond Burdick, Tulsa, one of the foremost pediatricians of Oklahoma died suddenly from apoplexy in the city of Tulsa, December 9. Dr. Burdick was born in Sharon, Wisconsin, April 28, 1877, graduating from the Hahnemann Medical College in 1900. His death was not a surprise to his close friends as he had been in bad health for some time but was unable to follow the advice and take a rest which might have prolonged his life. Dr. Burdick practiced medicine in Detroit, Michigan one year, Boulder, Colorado six years, Chicago six years, after which he located in Tulsa, since which time he resided in Tulsa where he built up a large practice in his specialty of Pediatrics. His remains were interred in Boulder, Colorado, burial services being held at the First Presbyterian Church, Tulsa, December 10th.

The Tulsa County Medical Society reported the following resolutions by its Committee on his death.

#### RESOLUTIONS

The Tulsa County Medical Society and the community at large has sustained a deep loss in the death of J. Raymond Burdick, on December 9th, 1922.

Dr. Burdick was an honor to the profession of medicine. As a skillful physician he gave himself unreservedly to his work. His service in the Public Health Clinic for children, showed his unselfish devotion to the poor and needy children, and his skill in bringing health to those who were ill.

Therefore, be it resolved, by the Tulsa County Medical Society, that we express our highest appreciation of the rare service of Dr. Burdick to our society and to the community, and we would record our esteem for his noble character, his beautiful Christian life, and his skill in his profession.

#### COMMITTEE

Dr. A. W. Roth  
Dr. Flannagan  
Dr. Garabedian

#### DOCTOR GEORGE CLINTON EVANS

Dr. George Clinton Evans, an elderly member of the Tulsa County Medical Society, died at the Oklahoma Hospital on Dec. 13th, after an acute illness of about two weeks.

Dr. Evans' health has not been good for sometime and he has not been engaged in very active practice for that reason. The cause of death was senility.

Dr. Evans was buried in Tulsa where he has practiced many years.

#### DOCTOR JAMES EDGAR YARBROUGH

Dr. James E. Yarbrough, Erick, Oklahoma, died suddenly in December at his home in Erick. Cause of his death was heart disease. Dr. Yarbrough was born at Barnsville Georgia, December 1, 1876, receiving his preliminary and literary education at Amity, Arkansas and the University of Arkansas, graduating in medicine from the University of Little Rock in 1897. After practicing at Amity, Arkansas for many years he removed to Erick where he practiced until the time of his death. He was a consistent member of many Medical Fraternities throughout his professional career and at the time of his death was Secretary of the Beckham County Medical Society which service he rendered his fellows for many years past.

*Doctor:*

*Pay your dues  
for 1923 before  
February 1st.*

*Abstracts, Observations from Current Medical Literature*

### EXTRAORDINARY DEVELOPMENT OF THE TACTILE AND OLFACTORY SENSES

Thomas J. Williams, Chicago (Journal A. M. A., Oct. 14, 1922), discusses the case of Willetta Huggins, aged 17, who "smells" colors and "hears" with her finger tips. She has been wholly deaf seven years and completely blind for about two years.

### THE CAUSES OF SURGICAL FAILURE IN HYPERTHYROIDISM

A review of the literature shows that from 65 to 75 per cent. of the patients operated on for exophthalmic goiter make a complete recovery. The majority of the remaining 25 to 35 per cent, are benefited; but some show no improvement, and death occurs in from 1 to 4 per cent. In the cardiovascular group of goiters, including the toxic adenomas, adenomatosis and compensatory hyperplasia, better results are obtained. During the last two and a half years, approximately 300 cases of goiter of various types have been studied by J. Earle Else and Harry S. Irvine, Portland, Ore. (Journal A. M. A., Oct. 14, 1922). In this group were several cases in which the patients had been previously operated on without complete relief. These cases were studied in conjunction with unoperated cases of similar types in order to determine, if possible, the causes of the incomplete results or failure. The authors found that deaths or severe reactions following operations are for the most part due to avoidable errors. Incomplete results following operations on patients with hyperthyroidism are due to delayed operation, insufficient operation, or insufficient after-care. It is urged that patients with hyperthyroidism must be operated on early if permanent lesions are to be prevented. Medical treatment will usually carry a patient over the crisis into the stage of remission, but beyond its use in preparing patients in a precarious condition for operation, it has no place in the treatment of toxic goiter. Hyperthyroidism is a surgical disease. The authors stress the fact that after-treatment is as important as the operation. A surgeon's responsibility does not

end until the patient is in the best possible physical condition. A surgeon is not justified in operating in, or treating, a case of hyperthyroidism without frequent determinations of the basal metabolic rate.

### SYPHILIS OF THE MOUTH

William Allen Pusey, Chicago (Journal A. M. A., Oct. 14, 1922), states that there is a close relation between the tissues of the mouth and those of the skin. Their structures are very much alike, and they react to many pathologic processes in the same way. There are numerous systemic diseases in which there are eruptions on the oral mucous membrane as well as on the skin, and these oral eruptions are identical with those of the skin, except as they are altered by the peculiar local conditions to which they are subjected in the mouth. These facts are particularly well exemplified in syphilis. The skin and the mouth are the structures for which syphilis shows its greatest predilection, and the predilection is quite as great for the mouth as for the skin. It is probably true that syphilis occurs with as great frequency in the mouth as on the whole surface of the skin. Its frequency in the mouth, then, would of itself make syphilis of the mouth a subject of great practical importance. Pusey discusses primary syphilis of the mouth—about 60 per cent of all extragenital chancres are chancres of the mouth, secondary syphilis of the mouth, such as mucous patches, smooth glossitis of early syphilis; condylomas; tertiary syphilis of the mouth—gummas, interstitial infiltrations, smooth atrophy of the tongue, sclerosis of tongue, leukoplakia and macroglossia and macrocheilia; congenital syphilis. The treatment of syphilis of the mouth is the treatment of the disease in general. The lesions of syphilis in the mouth heal with greater rapidity under specific treatment than do those of the skin surfaces. The late lesions of syphilis of the mouth yield promptly to specific treatment, whether arsphenamin, or mercury and the iodids, or both. For their healing, mercury and the iodids are all sufficient, although healing is somewhat more rapid when they are combined with arsphenamin. No local treatment of either early or late syphilis of the mouth is necessary beyond cleanliness and obvious rational measures. The only lesions that will not heal under specific treatment are those in which there is dead bone whose removal is necessary before cure can occur.

## STANDING COMMITTEES.\*

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\*This list is published bi-monthly.

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1922 - 1923

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Meeting Place, Tulsa, May, 1923.

Delegates to the A. M. A.: Dr. W. Albert Cook, Palace Bldg., Tulsa (1923-1924); Dr. J. M. Byrum, Shawnee (1922-1923).

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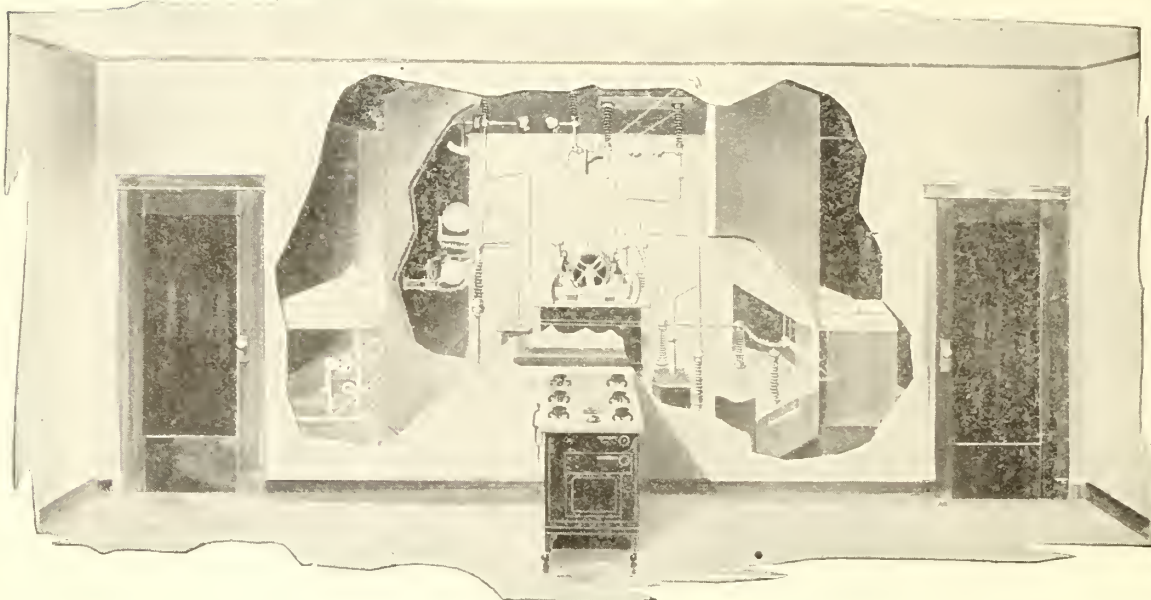
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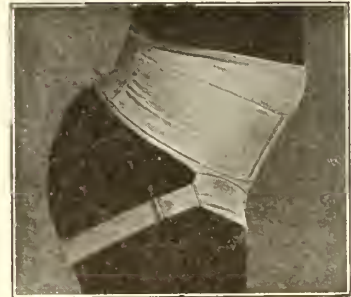
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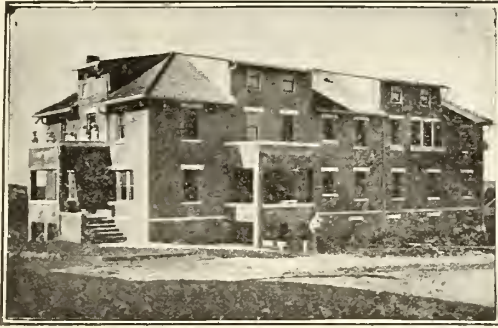
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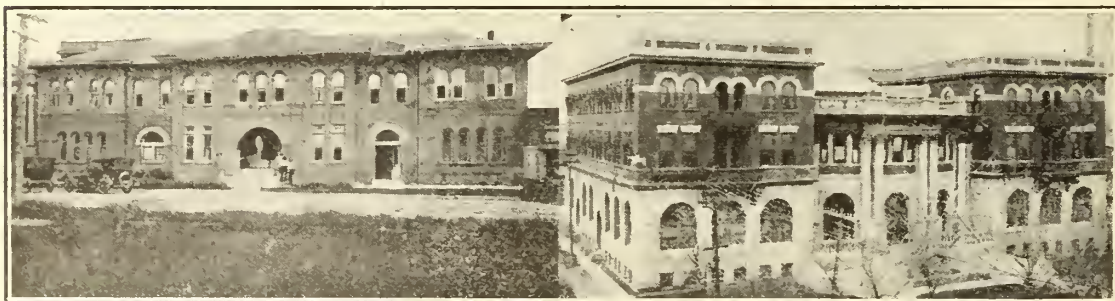
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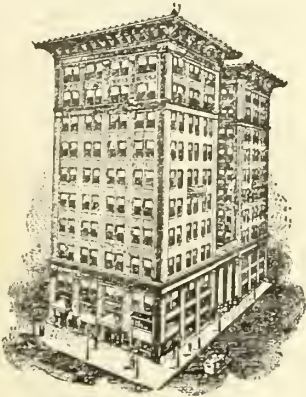
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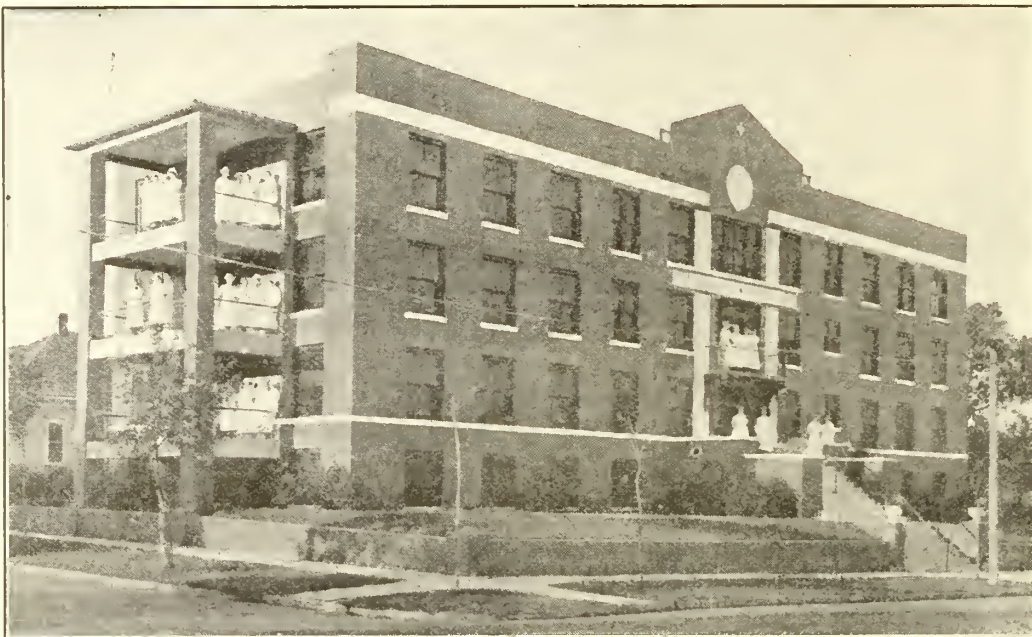
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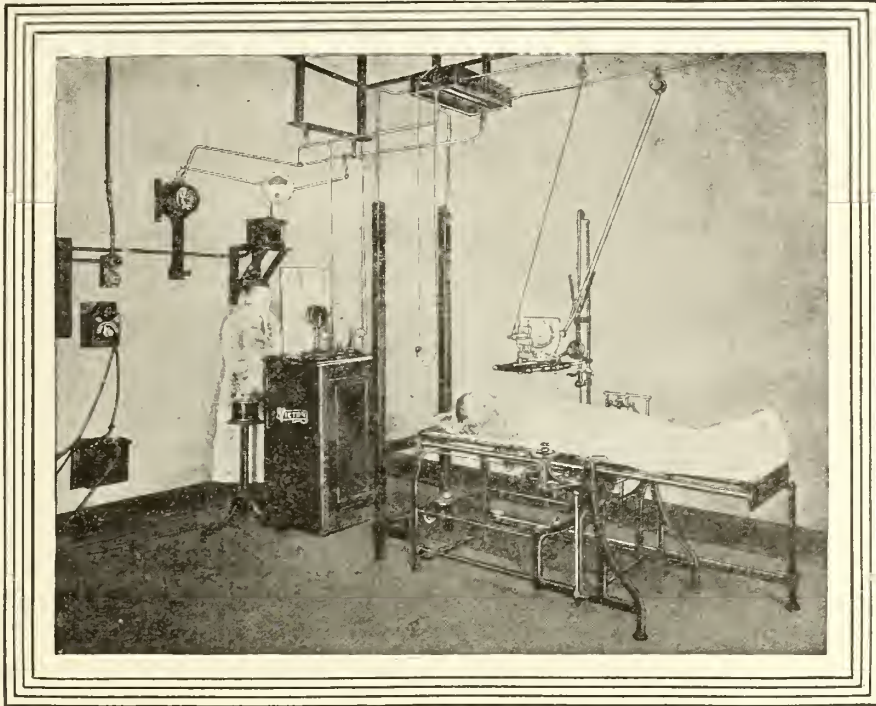
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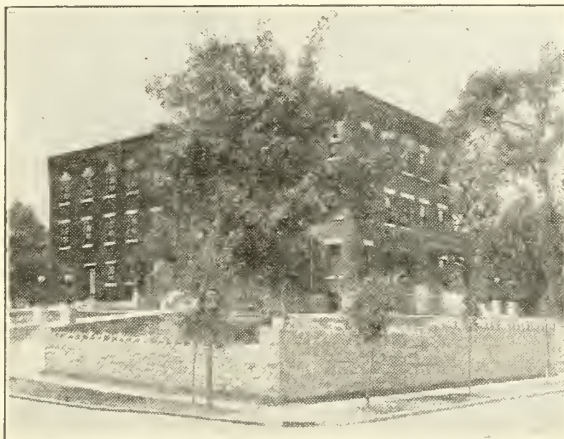
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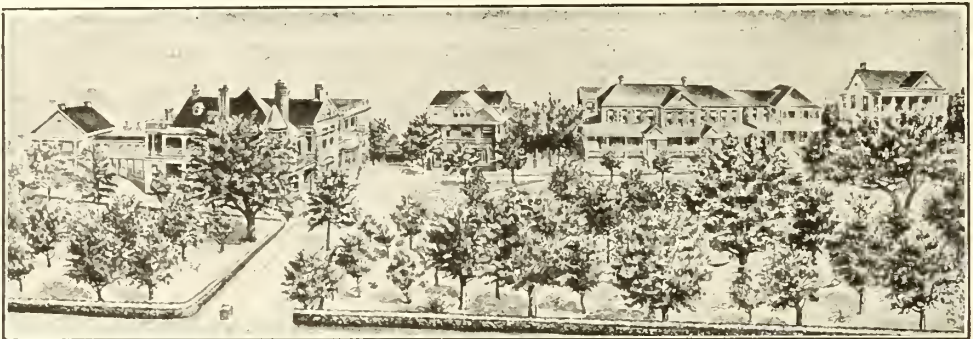
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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

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### SUPRA PUBIC PROSTATECTOMY

VICTOR M. GORE, M. D., F. A. C. S.

Clinton, Oklahoma.

In 1886 Belfield of Chicago performed the first supra-pubic prostatectomy of which we have an authentic description. McGill, of Leeds, England, did the operation in 1889. Eugene Fuller of New York in 1894 published a very accurate account of the complete enucleation of the prostate by the supra-pubic route. A great many writers have given Freyer, of London, credit for the first description of the complete operation. According to Dr. W. W. Keen, this is an error as he states he assisted in the preparation of Fuller's paper which was presented in London some five years before Freyer's publication. Be that as it may, Dr. Freyer's description of the operation ranks even today as a classic in surgical literature. While great improvements have been made in the technique, the original descriptions of Fuller and Freyer are today very complete.

Cases requiring prostatectomy are in the greater majority those of benign hypertrophy, eighty percent as compared with twenty percent of carcinoma.

It is now well established that the vast majority of men who pass the fifth decade have more or less enlargement of the prostate. There are many factors which contribute to this. Among the first are previous inflammatory conditions of the gland frequently specific, but many times otherwise, constipation, overfeeding, alcoholism and sexual excesses all play their part in bringing about the hypertrophy of this gland which is the cause of much suffering and shortening of life if not promptly

attended to. It is very generally accepted at this time that chronic inflammation is the greatest single factor in causing hypertrophy of the prostate. The old theory that the prostate was the analogue of the uterus and that its hypertrophy was similar to Fibroid formation in the female has long since been discarded as erroneous.

The initial changes in benign hypertrophy begins in the epithelium of the tubules and as we find the greatest amount of enlargement in the portions of the gland most plentifully supplied with tubules, that is the lateral lobes. We find the lateral and middle lobes very constantly enlarged while the anterior and posterior lobes are very infrequently affected in the benign cases. Of course, in carcinoma, the reverse is true as in this condition it is the posterior lobe most frequently the seat of the primary focus. The size of the gland has very little to do with the production of obstruction. As the obstruction is purely mechanical, a very slight enlargement of the middle lobe would cause retention. Much more surely than a mammoth hypertrophy of the lateral lobes.

Everyone has found on examination of these patients that the size of the gland has apparently nothing to do with the severity of the symptoms.

It is truly remarkable how long patients suffering with enlarged prostate will go along before seeking surgical relief. Practically all are forced to seek operation by an acute retention. Many have had a catheter life for one, two or three years, some even longer. There has been, of course, residual urine for a long period of time, with accompanying cystitis, back

pressure and kidneys and enormous distention of bladder are rather constant phenomena.

A great number of these cases present themselves suffering with an acute retention, the bladder enormously distended, usually a great many futile attempts at catheterization have been made, great traumatism to the urethra has been done, frequently the patient has been subjected to a general anaesthetic, at times a trocar has been plunged into the bladder. The patient is exhausted from loss of sleep and suffering, and is at the moment a very uninviting surgical risk.

After a thorough cocainization of the urethra it is usually possible to insert a catheter, if not a soft rubber one with the aid of a carrier then a full curve metal will usually rather readily enter. Great care should be taken not to relieve the distention too rapidly. That is, if the catheter is kept in, it should be clamped or plugged so that in the beginning there is not continuous drainage. After two or three days of interrupted drainage, supplemented with warm boric acid irrigations, the drainage can be made continuous. The washings with boric solution should be continued. After this time we can proceed to make an examination of the patient.

The ordinary chemical and microscopic examinations of the urine having been made, we examine bimanually to ascertain the size, consistency and extent of the gland. This is followed by thorough cystoscopic examination, the ureters catheterized and the phenolsulphonthalein function test made. Blood urea content is determined and with these facts before us we are enabled to ascertain what should be our course with this particular patient.

Operative interference having been decided upon, we proceed in the following manner. A preliminary hypodermic of morphine is administered usually 1-6 gr. or if a very robust individual, 1-4 gr. The sterile soft rubber catheter is inserted into the bladder and the bladder irrigated with boric acid solution. The pubic region having been shaved, cleansed with benzine and painted with iodine in the usual manner, the skin and underlying structures are infiltrated with 1-2 of 1 percent novocain and an incision made down to the bladder wall. The point of reflection of the peritoneum is located. All bleeding points ligated and the

bladder opened as high up as possible, care being taken to avoid traumatising the peritoneum. The bladder is explored by the finger and by vision and any stones present are removed. A large drainage tube with small soft rubber tube fastened to its side is introduced into the bladder. Two figure eight stitches through and through one on each side of tube, inverting the edges of the bladder are inserted and tied, thus completely closing the opening about the tube. The two angles of the wound are closed with through and through sutures a small drainage tube is placed in the lower angle down to the fascia. A glass connector is applied to drainage tube and another rubber tube joined on to carry off the urine to a bottle below the bed. The suture material is silk-worm gut.

The bladder is irrigated twice a day with warm boric solution through small tube and flows out through supra-pubic drainage tube.

If the figure of eight sutures are carefully placed and the edges of bladder wound inserted as they are tied, there will be no leakage for ten or twelve days when the tube can safely be removed and irrigation continued if desirable through urethra.

We urge these patients to sit up a large part of the day as soon as the drainage tube is removed from the bladder. It is essential that patients of this class have extremely careful attention hygienically as they are very likely to develop excoriations on the cutaneous surfaces unless carefully protected from the urine. Dressings should be frequently changed and the bed kept dry.

We continue the boric acid irrigations for a number of days varying in each individual case, until the time arrives for the second stage. The average length of time in our series of cases to elapse between stages has been eleven days. We are guided by both the condition of the bladder and the general condition of the patient in determining the optimum time for the second stage.

Conditions being the best we can hope to attain in this particular case, we proceed to the second stage. A preliminary dose of morphine 1-6 gr. and atropine 1-120 is given. The field prepared in the usual manner. Gas and oxygen are administered. The silk worm gut stitches are removed and the bladder wound opened with the fingers. A self-retaining bladder retractor is inserted

and the interior of the bladder carefully inspected, irrigating through catheter in urethra if necessary. The outlines of the gland being determined visually, the retractor is removed. The index finger of the left hand is inserted into the rectum and the prostate lifted up as high as possible. The index finger of the right hand is inserted into the urethra from the bladder and the mucous membrane broken through at the anterior edge of the prostate, this is the floor of the prostatic urethra, the finger follows the line of cleavage forward and upward first on one side and then on the other, the apex of the gland is rapidly freed from the urethra and triangular ligament. The finger is next swept laterally and the gland freed from the base of the bladder. When we have freed the anterior and lateral portions we next insert finger between the prostate and rectum and turn the gland back into the bladder. The gland is then freed in the mid-line a half at a time and removed with forceps through the supra-pubic wound. The cavity is next explored to discover if all prostatic tissue is removed. Clots are carefully washed out and if there is much bleeding a soft rubber bag is drawn into the bladder, by attaching with a silk suture to the tip of a catheter that has been inserted through urethra. The catheter is pulled out drawing the soft rubber tube attached to bag with it. The bag is then inflated through a glass connector by lung power and drawn snugly down to the prostatic bed. The end of the tube is clamped and the bleeding readily controlled by pressure. A silk suture is tied onto end of bag before its introduction, is left long and protruding from supra-pubic wound to facilitate removal of the soft rubber bag the following day.

The wound is closed in the same manner as in the first stage, with the exception that the figure of eight stitches on each side of the large drainage tube are left quite long and tied in bow knots. The following day the sutures are untied, the tube removed, the soft rubber bag deflated and drawn out of the supra-pubic wound. The tube is re-inserted and the stitches tied inverting the edges of the bladder wound about the large drainage tube and thus preventing leakage.

The bladder is irrigated twice a day thru the supra-pubic tube with warm boric acid solution. The tube is left in place for four days when it is removed and a retention

catheter placed in the bladder through the urethra. Irrigations are continued twice a day through the catheter. It is necessary to change this catheter every other day. Usually after twelve to fifteen days the catheter may be removed and the patient encouraged to attempt to void. Irrigations are continued once a day through the urethra. These patients begin voiding usually about the third week. The supra-pubic wound heals in from three to six weeks in our cases the average has been four weeks. As soon as the supra-pubic tube is removed the patient is put up in a chair each day and encouraged to spend a large part of the day time out of bed. Dressings must be frequently changed and the patient kept scrupulously clean.

We have in this paper discussed supra-pubic prostatectomy only as applied to the benign hypertrophy. The advantages of the operation are as follows:

1. The approach is bloodless or can be made so.
2. Enucleation is rapidly and readily performed.
3. The field can be enlarged if desired very quickly.
4. The gland is made very accessible without the use of tractors.
5. Incontinence is a very rare occurrence.
6. Venereal potency is not often interfered with.
7. Persistent fistulae are very rare if the bladder incision is made high up.
8. The use of local anaesthesia and two stage operations give a very low mortality.
9. Age is a very small factor in determining the operability of a patient.

#### PROSTATECTOMY IN THE OLD.

DR. W. J. WALLACE, Ph. G. M. D.

Professor of Urology, University of Oklahoma,  
Oklahoma City, Oklahoma.

This subject has been selected on account of the frequent statement, from the patient or some member of the family, following an examination in which a prostatectomy is necessary, not only for the comfort of the patient but for the lengthening of his life, that the patient is entirely too old for such an operation and it is useless to think of undertaking same. All urologists, no doubt,

have heard such a statement when the above advice has been given, but there is no foundation for it, as I hope to show. The method that I am following at the present time in treating these old patients and truly bad risks, is giving me excellent results and with almost 100 per cent recoveries.

Statistics collected by Deaver and Herman (*Arch. of Surg.*, 1921, ii, 231) indicate that in prostatic operations the death rate steadily increases with the age; but in their own cases with a two-stage operation and with due pre-operative care, they have found that the mortality was higher between the 60th and 70th year than between the 70th and 80th. That age of itself has relatively little influence, is the expressed opinion of the best qualified authors who have recently written on or discussed this subject. But such patients cannot withstand operative shock with the same endurance as the relatively young. And as a general rule the convalescence of very aged patients after prostatectomy is stormy, as compared with the easy recovery of younger patients. Aged patients, therefore, require a very special course of pre-operative treatment and observation.

As a rule these patients have high blood pressure, associated with uremia, with a certain amount of sepsis, together with a varying amount of residual urine. Sometimes this residuum is very great on account of acute retention, such retention being most frequently due to the patient going beyond the usual time to void, or having been chilled through exposure. At times catheterization attempted by the patient is ineffective; the catheter fails to reach the bladder, then a physician is called, who not using the proper sizes and shapes of catheters, causes much trauma from the unsuccessful attempts, so that there is not only retention, but bleeding from the post-urethra with swelling and corresponding shock. Fortunately, we usually see these cases before they have reached this extreme condition.

When a patient is in such a condition I slowly drain the bladder of its contents, usually with a proper assortment of catheters, or with a metal staff to be used in a soft rubber catheter. I am usually able to enter the bladder; when I have done, the catheter is retained by properly applied adhesive strips, and contents of the bladder slowly withdrawn, as follows:

Usually 10 ounces each two hours until

the bladder has been emptied. Some urologists prefer withdrawing a certain amount of urine, say 12 ounces, followed by an injection of about four ounces of Boric acid solution. Personally, I do not like to mix the contents of the bladder as we are likely to stir up a nest of infection, which is perhaps lying dormant in the bladder, and disseminate the poison throughout the system.

I prefer having the patient drink water copiously, eight ounces every hour when awake; by so doing I am able to dilute the contents of the bladder in a physiological way.

After each withdrawal of urine, the catheter is plugged; thus, it is very easy every two hours to remove the plug and drain the amount mentioned. Occasionally, on account of over distension of the bladder with swelling and hemorrhage, it is utterly impossible to pass anything to the bladder, in such a case a trocar and canula, size 12 french, is thrust through the supra-pubic region into the bladder. This is very easily done by using a little novocaine at the point where entrance is to be made, and making a small slit with a scalpel through the cutaneous layer; the puncture is then easy. Through the canula a No. 10 rubber catheter is now passed to the bladder and the canula removed; the catheter is stitched to the bladder walls and the urine withdrawn in the same manner as through the urethra. A cystotomy at this time would be fatal in the majority of cases, and should be delayed until the patient is both clinically and pathologically free of uremic symptoms.

After a few days drainage through the supra-pubic catheter, the swelling in the post-urethra will have subsided enough to pass catheter through the urethra into the bladder, then we remove the tube from above and begin our routine system of building up the patient preparatory to the after treatments.

Preparation and preparedness are the essential factors in successful prostatectomies.

After the patient has entered hospital and the indwelling catheter properly retained so as to overcome absorption from bladder, we begin systematically to check up, and build up, and remove all foci or contributing causes that will be likely to weaken him.

Daily cathartics are administered, as adequate elimination is essential; distilled water, eight ounces every hour when pa-

tient is awake; diet is mostly low protein in character, with a glass of milk between meals and at bed time. Patient to be kept up most of the time in a chair as I like these old patients to think themselves fit, and therefore, they must be encouraged along this direction through the entire course of treatment.

We then have both the retention and excretory tests made; the phthalein is usually very inaccurate in these old prostates on account of diverticulations, still we must use it; the blood chemistry consists of the N. P. N., U. N., Uric Acid and creatinin; this is much more accurate and dependable in this class of work than phthalein, but both should be used, and it is my custom to make these tests every third day, as well as the blood pressure.

During all this time we must closely observe the condition of the patient and whether or not he is uremic, as it is unsafe to operate during such conditions. By checking all of the tests as mentioned, together with the clinical symptoms, we can usually determine when the patient is free from such, and when safe for our first operation, the cystotomy.

Usually the indwelling catheter should remain in bladder and the supporting treatment given along lines mentioned, from one week to two or three weeks, or until patient is physically prepared. There should be no hurry about operating these patients as at this period of life, time is no special object, and they cannot stand being hurried through this ordeal; we must go slowly and be sure of the symptoms, both clinically and clinicopathologically.

Sometimes the patient complains of the catheter, and that it is causing a great deal of discomfort; this can be overcome by a mild anodyne, and advice that they accustom themselves to the catheter, as it is essential, and that it can remain in the bladder for an indefinite time without any material discomfort.

When the condition is free from uremia, blood pressure standardized, and blood chemistry within the bounds of safety, then I do my first operation, cystotomy.

For a prostatectomy, I prefer to use gas and oxygen, as the anaesthetic, but occasionally on some very thin people I use local, novocain, anaesthesia. With the gas and oxygen, there is no shock, and it is

much easier to do this operation by using this general anaesthetic.

The bladder is quickly opened, stones or any foreign bodies removed, a three-inch tube placed for drainage, and patient is returned to his room. We then begin our second stage or re-building our patient preparatory for the last operation, the removal of the prostate.

The supporting or preparatory treatment is carried out in the same manner as in the first operation, blood chemistry; phthalein tests, and blood pressure tests being made every third day, together with daily observations; and when the patient has reached the condition of safety, both clinically and pathologically, which may be all the way from ten days to three or four weeks, then he is ready for enucleation of the prostate gland.

Again gas and oxygen anaesthesia is given, the supra-pubic wound is stretched sufficiently to admit two fingers in the bladder, counter pressure is made in the rectum, and the prostate is removed through the supra-pubic incision, or opening.

For fear of hemorrhage which is one of the serious factors to be considered, I always pack the bed from which the prostate is removed with a strip of gauze; I prefer this to the Hagner bag. The end of the string is brought out by the side and against the one-half inch tubing and the bladder, and tissues closed snugly around same. Patient is then returned to his room, and the head of his bed elevated 12 inches; proctoclysis of four per cent solution of bicarb. of soda, one pint, is given every four hours for the first 24 hours, and then repeated if indications warrant.

There will be some pain as the result of the packing of the prostate, and a desire to urinate on the part of the patient; this will be relieved by giving 1-6 grain of morphine, repeated as necessary; the packing is left in for two days, and then removed, as well as the drainage tube. I think the earlier the drainage tube is removed the better, and the more quickly the patient recovers, it is my custom to remove both the gauze and tube on second day.

The patient is encouraged to sit up in bed on the fourth day, and in a chair on the sixth or seventh day, or just as soon as his clinical symptoms will permit.

The after-treatment is an important factor and the patient must be watched very

closely and supported according to his symptoms.

### SUMMARY

The operation of removing the prostate from old men is practically safe, if the necessary precaution, preparations, and observations are made. Even in cases of high blood pressure, the prostate can be successfully removed by the step by step method.

Old age itself in no way contra-indicates operation, if the conditions of the patient be made fit.

### STATUS LYMPHATICUS

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So far as we know, the function of the thymus gland is yet undetermined. It exerts no influence on growth or metamorphosis. Its removal does not seem to cause any deficiency in metabolism or in the development of other members of the endocrine series. Though Bander states its removal will cause death by emaciation in a dog within one year. In spite of this seemingly functionless character, the thymus is of clinical interest in connection with the condition known as status lymphaticus.

Early in the eighteenth century. Bichort noted the association of sudden death with the enlargement of the thymus gland. This enlargement is now generally conceded to be one of a series of hereditary anatomical imperfections occurring in the same body, characterized by recognizable peculiarities, namely: Hyperplasia of the lymphoid cells in various parts of the body, hypoplastic deficiencies in certain blood vessels, especially the Circle of Willis and the arteries emerging therefrom, also the aorta. In the male, the penis in about twelve per cent of the cases is small and the glands acorn shaped. In the female, the uterus is hypoplastic in a considerable number of cases. Gross, a number of years ago, recognized what he called the "Angelic" type of children, whom he described as being well nourished and beautifully proportioned, with velvety skin and silk like hair, shapely, arching limbs and narrow waist. This description of angelic children, as given by Gross, conforms to the description of children of the status lymphaticus type. We also have another type that are coarse featured, but the skin is fine and velvety and the limbs shapely.

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After puberty the clinical recognition of status lymphaticus is readily accomplished. In the male, the configuration of the body is of two types. In one there is a magnificent array of muscles moulded over a body of fine proportions. Some very striking examples of physical beauty are seen in subjects of status lymphaticus. In the other type we see the square shoulders and often times flabby muscles. In both types the skin is very delicate, facial and axillary hairs are very scantily developed, the thoracic hairs are few or absent, the distribution of those of the pubis simulate those of a female, being sharply defined transversely and do not tend to grow toward the umbilicus. The thighs arch gracefully in a lateral and anterior direction. In fact, the general appearance simulates that of a female.

Status lymphaticus is about six times more common in males than in females. It is more difficult to recognize in the female by inspection. Here we see an unusually delicate texture of the skin, the normally graceful outlines are very much accentuated, there are small fat pads in the axillaries with a scanty growth of hair on them. Other visible signs in both sexes are a hyperplasia of the faucial, lingual and pharyngeal tonsils. Though not accessible to view, there are also hyperplastic changes in the lymphoid tissues and in Peyer's patches and the solitary follicles of the intestines. The normal thymus weights about 15.5 grammes. The thymus in typical cases of status lymphaticus weights about 25 grammes. In the recessive type the lymphoid tissues show marked atrophic changes. The thymus may be partly or completely replaced by fat.

There seem to be no definite, pronounced, pathological findings in the thymus itself, except, some hyperplastic cortical follicles that are in many cases extreme and some large sinuses that contain a large number of cells of the lymphocytic type. We do not know if this has any connection with the lymphocitosis often encountered in these cases. However, we have a lymphocitosis in the circulation in status lymphaticus that may, or may not, be an index to the degree of lymphatic hyperplasia. The per cent of lymphocitosis should always be reckoned with when estimating operative risks. It has been pointed out by Schridde and others that in whom there is a lymphocitosis of 40 per cent or more the danger of sudden

death during an operation is very great.

There are two varieties of death in status lymphaticus. One is in the nature of an intoxication and the other is mechanical, following hemorrhage into the brain.

In the intoxication form in youths and adolescence a microscopical examination of the lymphoid tissues throughout the body invariably shows myriads of necrosed germinal follicles. It should be remembered that during this period of life the lymphoid tissues are being more abundantly developed than at any other period in life. This is also the period in life in which sudden death from status lymphaticus is most frequent. After puberty the germinal follicles may be replaced by a collection of spindle shaped cells which is probably an attempt by nature to replace the necrotic germinal follicles.

The cause of sudden death in the intoxication form is not fully understood. Some maintain, among them, Blumer, that there is a substance, which probably is a nucleoprotein released from the necrosed germinal follicles that is immediately responsible for the sudden unexpected death. Symmers thinks it is more probable that the cause of death is more of the nature of an anaphylactic reaction. Sensitization is expressed by the necrotic germinal follicles and chemically by the release of nucleoproteids, while not strictly foreign, are in a toxicological sense alien products. Previous to the expiration of the anaphylactic incubation period, the lymph nodes are again subjected to destructive substances which brings about still further disintegration of the germinal follicles, thus completing the anaphylactic cycle. This destructive substance may be introduced in the form of antitoxins, vaccins, or otherwise or as substances which have escaped destruction or modification by the lymphoid follicles in the intestinal tract or which have been manufactured in the process of shock.

He thinks that at a certain time the tissues are so tuned that sufficient quantity of specific protein reacts violently, even to the extent of causing sudden death. While at another moment this same quantity of specific proteins have no effect. Probably the number of acute necrotic lesions in the lymph nodes and the stage of anaphylactic incubation period has much to do with these apparently inexplicable differences in the indurability of an individual or in individuals

having the same pathological state, that at one moment they are able to withstand and at another succumb to death.

In the recessive form death is due to a purely mechanical cause. There being a hypoplastic condition of the cerebral blood vessels, particularly of the arteries entering into the formation of the Circle of Willis. In about 40 per cent of all cases of status lymphaticus the cerebral vessels are in a hypoplastic condition. These cases are extremely important from a medicolegal standpoint. When a patient succumbs to sudden death from a trivial injury, that in a normal individual would be considered insignificant, an autopsy should always be made and the condition of the cerebral arteries noted. Symmers states that in the autopsy room of Bellevue Hospital where autopsies are made in medicolegal cases, at least a dozen cases are seen every year in which there is a cerebral hemorrhage, due to hypoplastic intracranial blood vessels. In subjects with hypoplastic blood vessels trivial causes may result in an intracranial hemorrhage, such as slight traumatism, physical excitement, intense strains or anything that will raise the arterial blood pressure.

Gross noted that his so-called "Angelic" type of children were more prone to contract infectious diseases and were more easily overcome by their toxicity than other children. This is also true in status lymphaticus.

Daut states that in his autopsies of children dying of diphtheria, over 25 per cent presented the anatomical changes of status lymphaticus. Elser states that in over 25 per cent of his autopsies held on cases dying of cerebro-spinal meningitis, the anatomical tissue changes found in status lymphaticus were present. Some observers have found them in as high as 60 per cent of their autopsies held on cases dying of cerebro-spinal meningitis. There are also a number of cases reported by different observers in which autopsies showed the characteristic tissue changes of status lymphaticus in deaths from typhoid and various other infectious diseases. The fatal termination usually occurred in a very short time. Much shorter than in the ordinary course of the disease.

Emerson had charge of one thousand patients suffering of attempted suicide, cocaine, morphine, alcohol, and other habit-forming drugs, he noted that 22 per cent had the clinical characteristics of status

lymphaticus. Bartel and his co-laborer held autopsies on two hundred and thirty-two cases of suicide in which 80.5 per cent showed the tissue changes of status lymphaticus.

Caisson disease seems to be closely associated with status lymphaticus. The hypoplastic condition of the cerebral blood vessels is an element of danger in workers in compressed air, therefore, individuals with the clinical signs of status lymphaticus should not be permitted to work in caissons.

In status lymphaticus the vasomotor system is easily disturbed. There is a noteworthy emotional instability. During the recent war, while at the Remedial Hospital, at Camp Sherman, I had the opportunity to examine a large number of troops for classification. It was noticed that a large number of the so-called N. C. A. cases had the typical clinical signs of status lymphaticus.

To the average physician, the clinical signs are probably of more interest than the pathological findings. No doubt we can all recall cases in which sudden, unexpected death occurred to our great surprise, even before we had made a diagnosis or a few hours after we had assured the relatives that there was no danger and that the patient in all probability would soon recover. When we have a patient with the clinical signs of status lymphaticus we should always proceed very cautiously and explain to those concerned the possibility of a sudden fatal termination in death, due to anatomical defects over which we have absolutely no control. Thus, we may be relieved of a great deal of anxiety afterwards and maintain the high opinion of the family in our ability, that so often is shaken when these unfortunate deaths occur so unexpectedly.

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## URTICARIA

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The subject of my paper was selected for the reason that urticaria is at once the simplest and most transient of diseases and again the most persistent and troublesome of all dermatological manifestation with which we have to deal, in many cases taxing the

resources of the most expect therapist and careful observer.

If I am successful in preventing the error, many times made, of conveying to a patient or his friends that they have just a simple case of hives which a dose of salts and a spoonful of bicarbonate of soda will cure, my little contribution to this program shall not have been in vain.

Urticaria is an inflammatory disease of the skin manifested by an eruption of whitish pink or red elevations on the skin or mucus membrane which, for want of a better name, we call wheals. These may vary in size from that of a pin head to one I saw last summer that was as large as a hen egg.

In its description various names are given as urticaria annularis, urticaria vasculosis, urticaria bullbosa, urticaria tuberculosa, urticaria purpura and urticaria papulosa. These are, of course, various types and merely describe the external manifestation, descriptions, however, which should be kept in mind in the differential diagnosis.

There are two principal types of the disorder, the acute and the chronic; the acute is very evanescent, the wheal appearing suddenly on any part of the body with or without constitutional symptoms, as anorexia, malaise or headache.

The subjective symptoms are usually pronounced: intense itching, burning and stinging sensations sometimes make life miserable; occasionally the mucus membrane of the mouth, throat or larynx is involved; if the latter, serious disturbance of breathing may demand prompt action and probably our best remedy in this contingency is the hypodermic administration of adrenelin solution in ten or fifteen minimum doses to effect.

The transient or rapid appearance and disappearance of the lesions is possibly its most distinguished characteristic, together with the intense itching. Linear wheals can be produced by local irritation in most of the cases, a condition known as dermatographism, demonstrating that the entire skin is involved in the pathology.

The acute variety usually terminates in three or four days. The chronic type, however, may persist for many years and elude the most searching investigations as to its etiology.

There is another form of urticaria sufficiently distinct to justify separate men-

tion, namely, that occurring in infants and childhood. It is persistent, having periods of quiescence and relapses, usually worse in the summer months and characterized chiefly by papules, pale or red in color. If examined in the early part of the night when they give the most distress, an engorged area around the papule will be observed closely resembling a wheal. The eruption may be widely disseminated, especially on the trunk, and because of its similarity has been described as *Lichens urticatus*. As in all dermatological lesions, one must ever keep in mind the changes in morphology due to secondary infections from scratching and irritating local applications; also, this particular type must be distinguished from scabies and prurigo.

As to the etiology, it is now generally agreed that the condition is due to some toxic substance introduced into or produced within the body in certain sensitized individuals. It is a rather common observation to see urticaria develop following the administration of foreign proteins as serums and antitoxins indicating an anaphylactic reaction.

Some individuals are predisposed to the extent that the condition is easily induced by the ingestion of certain foods as eggs, cheese, pork, shell fish of all sorts, strawberries, oatmeal, pickles and a variety of canned goods. Certain drugs as quinine, salicylates and antipyrine will in some cases bring about an attack. Emotional disturbance as fear, anger or shame may cause urticaria, due no doubt to interference with the function of intestinal digestion resulting in the production of toxins responsible for the disease.

We may have urticaria concurrent with malaria, prurigo dermatitis—herpetiformis, obstructive jaundice, syphilis and many other constitutional disturbances.

The pathology, so far as the local manifestation is concerned, has been thoroughly studied by Gilchrist and others. Until recently it was thought that urticaria was an angioneurosis in which the toxin was supposed to act through the nervous system. It is now, however, generally accepted that the toxins circulating in the blood or deposited locally, act directly on the vessel walls producing an acute inflammatory, oedematous swelling. There is a profuse emigration of polynuclear leucocytes and lymphocytes.

In the diagnosis few errors will be made if we keep in mind the ephemeral character and rapid evolution of the lesions together with the constant and severe itching and burning. From papular erythema it is readily differentiated by the absence of subjective symptoms and the characteristic large flat papule of the former as compared with the urticarial wheal. One may be confused occasionally with the lesions of erythema multiform. These are, however, more apt to be on the extensor surface of the forearm and neck, are more persistent and devoid of subjective symptoms.

The treatment of urticaria is usually quite simple and the first indication is to remove the cause if possible. Waugh's slogan, "clean out and keep clean," is particularly applicable to this disease. If the symptoms are persistent and the cause not apparent, one should make the skin test for the various protein reactions that may lead to the definite etiological factor. However, in my own experience this has never been very profitable, due possibly to the comparatively limited number of cases for observation. The local treatment is usually in the form of baths, lotions and powders. Two ounces each of sodium carbonate, sodium biborate and potassium bicarbonate in thirty gallons of water makes a very satisfactory alkaline bath. If an acid bath seems to be indicated, one half ounce of either hydrochloric or nitric acid to the same quantity of water will serve. A starchy solution will often be effective which is made as follows: Take a sufficient quantity of starch, which, when added to a pint of cold water and partly boiled, will have the consistency of thin mucilage, then add one dram of zinc oxide and two drams of glycerine before the boiling is completed. Cool, then apply and await the gratitude of an heretofore distressed patient. The usual calamine and zinc oxide lotion with one-half to one per cent of phenol or diluted hydrocyanic acid is always valuable. If a powder seems to be indicated, none better than the Anderson powder, consisting of camphorae pulv. one and one-half drams, *zinci oxidi* one half ounce, *amyli pulv.* one ounce. If a traumatic dermatitis supervenes as a result of scratching, an ointment of two per cent salicylic acid and one half to one per cent of menthol will prove of service. In the chronic cases wherein the etiology is obscure, the treatment is necessarily more or less empirical. I have found, in three cases, that four to ten minims of one to one

thousand adrenalin solution has given good results and as heretofore suggested, this remedy is particularly of service when the larynx is involved in which case it should be given hypodermically.

Considering the anaphylactic nature of the disorder, the individual may be desensitized by the administration of some foreign protein and probably typhoid bacterine is as good as any and should be given a trial in obstinate cases, using five hundred million killed bacteria injected subcutaneously twice weekly for a month or more. Sutton reports good results, in two cases that were persistent, following the administration of emetine hydrochloride one half grain hypodermically daily for a week or ten days.

In conclusion, search diligently for the etiological factor and the treatment then becomes a simple matter.

#### CO-OPERATION OF THE NURSE IN PREVENTION OF DISEASES IN INFANCY AND EARLY CHILDHOOD

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Today, we hear a great deal about the importance of Preventive Medicine, especially that part dealing with infancy and early childhood. The co-operation of the nurse with the physician would help much in its progress as the nurse usually has the confidence of members of the families where she has been employed and she is often questioned regarding the children's health before the doctor is consulted. This fact is demonstrated every day in taking histories, when the mother will say: "The nurse told me so and so." Therefore, the members of this organization should keep posted on work that is being done along this line.

The first guard the infant receives for his growth and proper development is breast feeding. Every child born is entitled to the best start in life that is obtainable and in the majority of cases the mothers can nurse their offspring. The milk has great protective powers, containing anti-bodies which render the baby immune to most infectious diseases. We find its aid in helping sick infants in hospitals where it is saved and given to those who need it most.

An exception to breast-feeding is when the mother has some incurable disease, exposing the baby to the same condition or activating her own disease. Mild cases of typhoid in the mother, do not call for the removal of the infant from the breast, as there is not much danger of transmitting the infection through her milk to the baby.

The baby is never to be taken from the breast because it is not gaining nor because it has colic. The nurse can do much to relieve both of these conditions. The first is usually caused from insufficient secretion or from lacking enough of one or more milk constituents. As a rule, improvement is brought about by proper, wholesome diet for the mother and regular intervals of nursing with complete emptying of the breasts when the baby has finished. This is done by manual manipulation or finger milking and is carried out as follows: The breast is grasped by thumb and index finger about one centimeter back of the areola and a milking motion is carried out toward the nipple. This method is necessary to obtain results, as the milk ducts extend but a short distance back of the areola. Additional feeding must be resorted to until the milk is brought up to standard in quality and quantity. The baby nurses regularly after intervals of three or four hours and after each breast nursing is given as much artificial food as he will take. The amount will depend upon the nursing from the breast and the size and appetite of the infant. Milk analysis gives us no important information but we can tell much by the weight and disposition of the baby. The weight curve is an indicator of his welfare. If the baby has frequent, curdy, foamy stools, vomiting, or colic, but has a substantial weight curve, he should still use the breast. Alternating feeding with the breast and bottle is to be condemned as the babe will soon give up the breast and we do not have the natural stimuli for the breast frequently enough.

For the colic, much can be done by giving about an ounce of case milk before each feeding, or one ounce of barley water predigested with Taka-Diastase. When artificial feeding is necessary, the nurse is often consulted and it is her duty to condemn all condensed or sterilized canned milk. If the supply of cow's milk in the locality is clean and fresh, she should recommend it and if it cannot be obtained, powdered milk can be used. S. M. A. would be preferred first and Dryco second. If the nurse is doing

social work and is not acquainted with either powdered milk it would be well for her to investigate.

Much can be done to aid the mothers in keeping the nipples clean and soft, preventing cracking and infection, which cause abscess and taking the child from the breast. The nurse can easily see how important it is to do all that she can to keep the babies to the breast, making stronger and better babies and reducing the death rate the first year of life. One-fourth of the civilized race die during the first year. Sixty per cent of these deaths are due to nutritional disturbances and the other forty per cent to improper feeding.

The causes of death each year after the first are different, so it would be well to take them up with the mortality at the various ages. Bowel conditions are still the cause of over one-fourth of deaths during the second year. This is due to the variety of food that the child is eating at this time, some of which should not be given and some that is not properly prepared. Next in importance are the respiratory diseases which are responsible for 26.4 per cent of the deaths during this year. The mortality could be greatly reduced by educating the mother in dressing her babes, in the proper ventilation of the home and sleeping room and in not taking the little ones to public places. Epidemic diseases account for 17.8 per cent of deaths during the second year. Tuberculosis takes on a more prominent position and T. B. meningitis forms over one-half of the total of T. B. mortality.

In the third year of life, the four epidemic diseases are responsible for more than one-fourth of the deaths with diphtheria in the lead. Respiratory conditions still cause many deaths; accidents and injuries now play an important part and typhoid makes its appearance with a death rate of one per cent.

During the fourth year there is a reduction in the death rate. The epidemic diseases are still in the lead and responsible for about one-third of the deaths, with diphtheria the chief offender, causing one-sixth of the deaths. T. B. meningitis is still the main form of that disease. Accidents are on an increase with burns the chief cause of deaths. Typhoid is on the increase with the death rate of about that of the third year.

When we pass to the fifth year we find

the mortality rate due to the four infectious diseases, greatly on the decline, with the appearance of their sequelae, acute rheumatism and acute endocarditis, organic diseases of the heart, acute nephritis and Bright's Disease.

Heart disease occurs in one in every fifty of our population and the causes are: First, infectious diseases; second, intoxications; third, improper methods of living. The total death rate in this country from infectious diseases are as follows:

Diphtheria for all ages.....	12,442
Under five years.....	7442
Measles for all ages.....	10,442
Under five years.....	7034
Whooping cough for all ages.....	7837
Under five years.....	7454
Scarlet fever for all ages.....	3124
Under five years.....	1516
Typhoid for all ages.....	10,085
Under five years.....	620

What can the nurse do to aid in reducing the death rate due to these infectious diseases? In the families where she is nursing, she can talk to the members about the importance of strict quarantining. At the present time we have no preventive vaccine for measles and scarlet fever, and to reduce the prevalence of these diseases, the nurse should carefully watch and assist in educating the public in the real nature of disease transmission, in the prompt report to health authorities and in efficient isolation. For whooping cough we have a vaccine which is claimed by many to give very satisfactory results as a prophylaxis as well as a curative, and I feel that it should be used as the death rate from this disease under five years of age is equal to that of diphtheria. As for Typhoid, we all know what the anti-typhoid serum has done for adults, but in the pre-school age, this is the least important of the infectious diseases. The vaccination of children depends largely upon the local sanitary conditions and the presence of a typhoid epidemic. The child should be vaccinated for small-pox during infancy as the duration of immunity conferred by vaccination at this time is much longer and perhaps for life. In the prevention of diphtheria, we have two of the most efficient measures known at the present time to the medical profession. The Schick test determines liability to the disease and Toxin-Antitoxin gives a protection to those who are liable. Every pre-school child should be given

Toxin-Antitoxin, which would mean the extermination of this serious infection of young children.

The nurse and physician surely have the opportunity and responsibility of educating the public to obviate these infectious diseases which kill so many of our little children. Many of those who do not succumb are left with some organic disease which impairs them in later life for usefulness to themselves and the community in which they live. Let us put forth every effort that we can in their prevention and in the protection of our men and women of tomorrow.

### DIPH'THERIA

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About 1818 Bretonneau, a French physician, described a severe form of pharyngitis accompanied by a false membrane to which he gave the name diphtheria. It was many years before the name was generally accepted or the disease considered a distinct type. There is no mention of paralysis, although it must have been of frequent occurrence.

Membranous croup was not included except those cases in which there was an extension of the membrane to the trachea.

The treatment was directed toward the destruction of the false membrane by applications of concentrated hydrochloric acid, nitrate of silver twenty grains to the ounce and other corrosive agents. This was the general line of treatment when, in my childhood, this disease first came under my observation. As the treatment was then applied I wonder not at the terrifying destructiveness of the disease, but that so many were able to escape. As it was not generally believed to be contagious, there was no segregation of the sick and no quarantine measures of any kind.

In the beginning of my practice it was treated as an infection with sprays and local applications of germicides of all sorts and in all combinations. In addition to the general use of tonics and stimulants, we administered iodine, corrosive sublimate, carbolic acid and others with a purpose that in some mysterious way we might attack the offending germs from within. Some recovered but the mortality was high.

In the malignant cases we acknowledged our inability to stay the hand of the grim

destroyer. Dr. Knox, of Rush, told us that he had treated thirty consecutive cases of diphtheria without a single death and that he was beginning to think that he had found a satisfactory treatment. He had just encountered the disease of the malignant type in a family of three children. The well ones were segregated immediately, but one of them had developed the disease. He said: "The first one attacked has died, the second, although not now in a serious condition, will die, and gentlemen, the third one will be stricken and if so it, too, will die. This, gentlemen, is diphtheria."

A few instances have come under my observation where every child of the family has perished in rapid succession.

We accepted the antitoxin treatment enthusiastically. It was strenuously opposed by some of the members of this association. Statistics seemed to show that there were more cases of paralysis since the introduction of the antitoxin treatment. This was discussed, asserted and denied at our meetings. The new treatment was held responsible for this increase. At length some "Heaven born genius" saw and explained what should have been obvious, if we have more recoveries we are very likely to have more paralysis.

We are told that figures do not lie, but they may lead to very erroneous conclusions. A man was arrested for stealing an ax. One witness testified that he had seen the defendant steal the ax. Three testified that they had not seen him steal the ax. The justice ruled that the preponderance of evidence was in favor of the defendant and he was released. How often we are influenced in our judgment by evidence of the same kind.

In the beginning of the antitoxin treatment the doses, measured in antitoxin units, were far too small. The volume was large and we were not overconfident that the larger doses or the repetition of the treatment was free from danger. We have seen a gradual perfection of the serum, a much more concentrated solution, special containers and a more nearly standardized dose.

There was something disconcerting in the occasional reports of alarming prostration following the use of the serum, which we now recognize as the anaphylactic reaction.

This is better understood and we are able, to a certain extent, to guard against this danger.

Although much has been accomplished, we are far from the goal of our ambitions. The per cent of recoveries is encouraging but it is much too low. In Oklahoma the mortality rate is probably much lower than is shown by the statistics. It is difficult to obtain full morbidity reports outside the larger cities. Since in each case the undertaker must furnish a certificate of the cause of death, all deaths are reported. These causes would tend to make the mortality rate appear higher than it really is.

Statistics show that the incidence of diphtheria has not been lowered in the past twenty-five years. Possibly the figures in this case do not tell all the facts. Twenty-five years ago there were many more unreported cases. We certainly report many which our predecessors would have overlooked. However, the incidence is too high and should be materially reduced. To this end we must have a more rigid inspection of the cases of tonsillitis and simple sore throat. Often these are treated with domestic remedies until the presence of diphtheria is tragically demonstrated. I have seen diphtheritic paralysis follow in those who had been treated by the physician for tonsillitis. These are the centers and wide distributors of infection.

From the observance of this disease in past epidemics, I have reached the conclusion that the diphtheria bacillus does not readily attack the healthy mucous membrane. With a wide spread highly contagious disease of the tonsils or pharynx in a community, diphtheria finds a favorable field for development. When diphtheria is prevalent, those suffering from sore throat should be more generally segregated, not simply because they may have a latent diphtheria, but because they are much more easily infected if they chance to come in contact with it. The prophylactic administration of antitoxin has saved many lives but it is not entirely satisfactory. The immunity is of too short duration and the danger of sensitization to the serum is not to be lightly considered. The toxin-antitoxin promises to be more satisfactory both in the longer duration of immunity and the absence of sensitization. The possibility of those immunized becoming carriers is of

no more importance than the fact that those who have a natural immunity are frequently carriers.

If by general use of the toxin-antitoxin we are able to immunize the very young even for a few years, deaths from diphtheria will be greatly decreased, particularly those resulting from membranous croup, which is responsible for more than half the fatalities now reported. In the doubtful cases of croup, antitoxin should be given. It is too hazardous to delay until the diagnosis is made certain by symptoms of serious obstruction.

Antitoxin has worked wonders in the treatment of diphtheria. The younger members of the profession will never experience the disappointments and heart aches that we have endured in our treatment of this disease, which in times past has been "the pestilence which walketh in darkness and the destruction which wasteth at noonday."

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**Discussion:** Dr. B. A. Hayes, Oklahoma City.

There are three points I wish to take up in discussing this paper. The first one is that the clinical diagnosis of diphtheria ought to be made easier and more certainly by the physician than it is. The one condition which resembles it most is acute follicular tonsillitis. I have often seen a solid white membrane spread over both tonsils, accompanied by fever and enlargement of the cervical glands, which showed no diphtheria bacilli at all. These membranes are usually due to streptococci or pneumococcal infection. The points of differentiation between them and true diphtheria are as follows:

1. The cervical glands are larger and more tender in comparison to the lesion in diphtheria than in tonsillitis.

2. The streptococcal membrane is less uniform in texture, is whiter in color, is much less adherent, is limited to the tonsils, is practically always bilateral, and will break off in flakes without leaving a bleeding point behind. The membrane of diphtheria is tough and adherent, and nearly always causes bleeding when it is removed. It tends to spread off the tonsil on to the surrounding pharynx.

It should be borne in mind that these points are not absolute, however, and in any

doubtful case no chances should be taken.

The second point I present is a successful laboratory technique for identifying the diphtheria bacilli. The method, taught by Dr. Cumnor, of Cleveland, Ohio, is as follows:

Make an emulsion of the bacilli with water on a **cover glass**. Dry slowly and fix in flame. Stain with Loeffler's alkaline Methylene Blue for one to three minutes. Pour off the stain and decolorize with one half per cent acetic acid by inverting the cover glass on a drop of the solution placed on a slide. Examine under oil immersion. The bacilli will appear as large light-blue rods, containing dark-blue polar bodies or cross-bars, depending on the age of cultures.

By this technique the bacilli appear almost as large as *subtilis*, and are very easy to identify.

The third point is the matter of treatment. I am in favor of large doses of antitoxin. In the Contagious division of Cleveland City Hospital, we used to give 30,000 to 40,000 units intravenously to severe adult cases. Mild cases received 15,000 units. In children mild cases received 3000 to 10,000 units and severe ones 10,000 to 20,000—all intravenously. The intravenous method gets results very rapidly, but is accompanied by severe chills and fever during the first six or eight hours after administration. Frequently the temperature goes up to 107 degrees. Then it drops and the patient is well. He should be kept flat on his back for five or six days afterward, however, in order to prevent a sudden death from vagus or phrenic neuritis. I think that intravenous injections should be used very cautiously in the home because of the severe reaction which follows; but in bad or delayed cases it is best, because it immediately neutralizes the toxic content of the blood. In mild or early cases there is no such hurry, and subcutaneous injection is safer both for the doctor and the patient.

In children too small to find the veins of the arms, the antitoxin may be given in the external jugular vein with ease. When the child cries the vein distends, especially when slight pressure is made upon it at the base of the neck.

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Dr. D. F. Stough, Geary, Okla.

Can the chicken be a host and carrier of the diphtheria germ? The reason I ask is

because of the experience I had a few months ago. A farmer living a few miles out of Geary, had sickness among his chickens and lost not less than thirty of them. They apparently had a cold in the head, and a very offensive odor about the head. One of his children developed diphtheria. All were given antitoxine. About six weeks later another child, one that had been given an immunizing dose of antitoxin, came down with diphtheria. A few days before he had carried some sick chickens from one pen to another. I am sorry that I did not myself examine the chickens and have the head of one sent in to the state laboratory for examination. I reported my suspicions to the State Board of Health, but they were unable to give me a positive answer to my question. It is my belief that the chickens had Diphtheria and were the source of infection for the children.

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Dr. John A. Hatchett, Oklahoma City.

Dr. Fisk has contributed many good papers to this association, including the one under discussion. We kindly remember him as one who always carried a message in his paper at once interesting, constructive and practical. He speaks of the days of long ago when diphtheria was diagnosed without laboratory aid and when antitoxin was unknown. Then the membrane in the throat was studied with a keen perception as the distinctive lesion of a grave disease with a high mortality and one involving an unusual professional responsibility. The findings in the throat, the coincident cervical angina in association with the constitutional symptoms were enough nearly always, to make the diagnosis clear, especially if in the midst of an epidemic. Indeed, so constant was a correct diagnosis made that many doctors came to regard their diagnosis infallible. Further observation, however, developed the fact that diphtheria might lurk in the background of a clinical picture of follicular tonsillitis. I fell into this trap to my humiliation. The mother was unusually anxious regarding her boy when I assured her he had tonsillitis and not diphtheria. Before the first boy's death in three or four days, a brother was taken with a violent case of laryngeal diphtheria and died quickly. After his death the trachea was opened and a mould of exudation found reaching from the larynx to the tracheal bifurcation. Had antitoxin been in use at that time, the first boy doubtless would have been saved. Large doses

promptly given and aided by intubation might have saved the second patient.

The discovery of antitoxin and its evolution as a remedy is one of the most glorious achievements of medicine. Experience has proven that it is virtually harmless and that the danger from anaphylaxis has been greatly over estimated. Dr. Fisk has materially changed his mind regarding the danger from anaphylaxis claimed in his paper written eight years ago. He rightly advocates giving antitoxin early in croup and in strongly suspicious cases and also to the very young in immunizing doses.

## PROCEEDINGS OF THE OKLAHOMA CITY CLINIC ROUND TABLE— WESLEY HOSPITAL

### ANGINA PECTORIS

D. D. PAULUS, M. D.,  
Oklahoma City, Okla.

Patient, male age 54. Capitalist—with negative family history. Had led a strenuous life for past 15 years.

Usual diseases of childhood with good recoveries. Typhoid ten years ago. Good recovery. No other illness.

**Present Complaint.** Started six months ago with "pounding and fluttering" of heart, especially noticeable when patient exerted himself more than usual. Upon retiring at night would notice the above condition just before he fell asleep. About four weeks ago first noticed pain under sternum. This was associated with dyspnoe upon exertion, aggravated by a full meal or by bloating of stomach. Pain has been very severe lately—out of all proportion to degree of exertion.

**Physical Examination.** Pupils equal and regular. Both react promptly to light and accommodation. Throat negative. Several filled teeth. Glandular system negative. Pulse fairly strong, regular. Heart, apex best fifth interspace outside of nipple line. Second aortic snappy: No murmurs, no extra systole. Abdomen—liver and spleen not palpable. Reflexes normal. Blood pressure 168-100. Pulse 68.

**Laboratory.** Urine 1021 alkaline, albumin, sugar and indican negative. No casts, blood or pus.

Fluoroscopic shows no widening of root

or arch of aorta. Left sided preponderance.

Wassermann negative.

Patient was advised as to condition. Complete rest, salt free and practically meat free diet. Digitalis in small amounts. Nitroglycerine gr. 1-100 dissolved under tongue when spells are very severe. Chloral hydrate gr. Vt. i. d.

One month later patient returned stating that he had not been getting along very well. Has spells of pains, radiating down both right and left arm, especially right and left wrists, also over heart. Pain also radiates to both sides of neck and cheeks. Patient has been trying to conduct business, having conferences on business matters in his home. Pain has been very severe and almost continuous for past three days. Nitroglycerine gr. 1-100 as many as six to eight doses a day, with several hypos of morphine sulphate gr. 1-4 did not relieve condition. At times suffering almost unbearable.

Re-examination at this time shows pulse very irregular. B. P. 185-100.

Patient put to bed and complete mental and physical rest enforced. Bromides in fairly large doses were given with chloral hydrate. Only liquid food. Digifoline one tablet four times daily. In all, about 80 gr. of bromides were given during the day. The next morning the patient stated he had rested well the latter part of the night. Was comparatively free from pain. Heart still slightly irregular. B. P. 160-100. At end of third day in bed his blood pressure was 130-80 and on fifth day 132-70. Some extra systoles were still present.

One month later the patient is doing well but has had several mild attacks. It will be interesting to note if the angina will disappear when auricular fibrillation set in or when cardiac failure becomes established should the patient survive long enough for this condition to occur.

The interesting features of this case are, the severity of the pain in the wrists during the attack and also the radiation of pain along the neck to the cheeks on either side. The failure of nitroglycerine to relieve the attack is not uncommon. The effect of sedatives like bromides, chloral hydrate and complete rest in bed on reduction of blood pressure is a rather frequent clinical observation. One must not forget, however, that the pressure will go up again when he begins to stir around.

## PLASTIC REPAIR OF SECTIONED TENDO ACHILLES, OLD.

MARVIN E. STOUT, M. D.  
Oklahoma City, Oklahoma

In June 1922, while working in the harvest, patient stepped on the handle of a draw knife which flew up and severed his left tendo Achilles, just above its insertion in the os calcis. The skin wound was very small and caused but little pain. It was not considered necessary to consult a physician and the patient began getting around after the second day by the aid of a cane. The wound healed in a few days, but he noticed that he did not have good use of the foot, in that he could not extend it, and he had no power to raise his weight on his toes. That there was no spring in his foot and he expressed himself as "walking like a duck."

Soon he noticed a depression or a gap in the tendon at the point of injury which gradually widened as time went on, until, when he consulted the clinic, there was a separation of about three inches due to contraction of the muscles which was impossible to overcome.

On October 12, 1922, a long curved incision was made, freely exposing the os calcis at the point of insertion, and the retracted end of the tendon. A good substantial section was taken from the posterior surface of the retracted tendon and turned down and sutured to the remaining fibers, and the periosteum of the os calcis at the point of insertion.

The wound was closed in the usual way and a plaster cast applied with the foot in extension to free the tendon from any tension. The cast was not removed for eight weeks when the wound was perfectly healed, and the union of the tendon appeared firm. He was instructed to begin using the foot slightly, and gradually to bring it into full use, and the function of the tendon has continued to strengthen until he is now walking without a limp and is able to bring his entire weight upon the toes of his foot.

## *Abstracts, Observations from Current Medical Literature*

### CARBON TETRACHLORID IN THE TREATMENT OF HOOK- WORM DISEASE.

In view of the interesting results obtained by Hall, the Bureau of Ankylostomiasis of the Medical Department of the Colony of Fiji undertook to study the value of carbon tetrachlorid in the treatment of hook-worm disease in human beings, and, during the period from Feb. 14 to May 30, 1922, administered the drug to more than 20,000 persons, the percentage of drug efficiency having first been established. The 20,000 treated persons were composed of 1,000 Europeans, 6,500 Indians and 13,000 Fijians. Original examination with the microscope revealed an infestation rate of 89 per cent. among the Fijians and of 93 per cent. among the Indians. To date, reexamination has been made of 823 persons in this district, of whom seventy-two were found to be still infested. In the opinion of S. M. Lambert, Suva, Fiji (Journal A. M. A., Dec. 16, 1922), this indicates that the single treatment method has reduced what was originally a 100 per cent. infestation to an infestation of less than 9 per cent. The cost of each treatment was found to be fourpence halfpenny. The dose given was 0.2 c. c. (3 minims) to the year of age, up to the age of 15, when the adult dose of from 3 to 4 c. c. (from 45 to 60 minims) is reached. The maximum dose depends on the size of the adult. Carbon tetrachlorid, in the dosage given, is not so effective a vermifuge as oil of chenopodium for removing *Ascaris*, only 40 per cent. of them being removed by the Fijian tests. The drug occasionally removes *Trichocephalus dispar* in small numbers, but it does not cure the disease. It seems, however, to remove *Oxyuris vermicularis* in large numbers. By no means the least valuable feature of carbon tetrachlorid treatment is the fact that, with it, it is easy to secure individual and public cooperation, as there is much less opposition to a campaign in which this drug is used than to one employing chenopodium or thymol. Rarely is there a refusal to take treatment. The dispensary in Suva, in response to public demand for treatment, opened two months before it had been planned to begin work in that district. In this preliminary period, 2,000 persons were treated at their own solicitation.

## SCARLET FEVER EPIDEMIC IN AN AGRICULTURAL SCHOOL

H. S. Diehl and W. P. Shepard, Minneapolis (Journal A. M. A., Dec. 16, 1922), report an epidemic of fifty-nine cases of scarlet fever occurring among the students of the Agricultural School of the University of Minnesota from January 25 to March 26. Of the patients, 93.3 per cent. were boys, and 6.7 per cent. girls. Of the patients, 55.9 per cent. lived in rural communities; 33.9 per cent. in towns of less than 5,000 inhabitants; and 10.2 per cent. in cities of more than 5,000 inhabitants. New cases developed at the rate of from one in three days to four in one day during the epidemic. By means of daily throat inspection with isolation of all suspicious cases and contacts, the epidemic was kept under partial control; but it was not until all students with even slightly reddened throats were isolated that new cases failed to develop. From the study of the epidemic, it seems probable that students showing no symptoms other than a moderately reddened throat were responsible for the transmission of much of the infection. A review of the clinical notes in the cases showed a great diversity of symptoms and complications. The mortality rate was zero.

## EXERCISE TOLERANCE IN HEART DISEASE

In persons recovering from protracted infectious diseases, the time to permit any physical activity and the amount of increase advisable from day to day can be intelligently determined only by an exercise tolerance test. If persons in whom heart disease has been diagnosed, who show nothing abnormal except a systolic murmur over the heart, tolerate vigorous exercise, it does much to dissipate the apprehension they may feel about taking exercise and strengthens the physician's conviction that he is dealing with a normal heart. This, perhaps, will make unnecessary the advice so often and so solemnly given these patients to be cautious about physical activity. Persons with valvular disease show the greatest variation in their exercise tolerance whatever the exercise may be, swinging dumb-bells, climbing stairs, walking, etc. Only by determining their exercise tolerance, says Theodore B. Barringer, Jr., New York (Journal A. M. A., Dec. 30, 1922), can the amount of physical activity most suitable for them be prescribed. There are

certain patients with advanced mitral stenosis who have a very small exercise tolerance. These patients have to be extremely careful about their physical activities. They improve but slightly, or not at all, on graduated exercise, and they have to take digitalis almost continuously. Patients with aortic valve disease stand physical activity, as a rule, better than those with mitral stenosis. When they show a persistently low exercise tolerance, the duration of life is generally short. Barringer believes that as time goes on the validity of the exercise tolerance test for determining the condition of the heart's functional capacity will become generally recognized, and our knowledge of heart disease will be much enriched through the facts acquired by this comparatively new method of cardiac diagnosis.

## INTRAPERITONEAL INSERTION OF BURIED CAPILLARY GLASS TUBES OF RADIUM EMANATION

The intraperitoneal insertion of buried capillary glass tubes of radium emanation has been resorted to by Isaac Levin, New York (Journal A. M. A., Dec. 16, 1922), extensively in intraperitoneal tumors of the gastro-intestinal tract, the uterus, the ovaries and in retroperitoneal tumors. An exploratory laparotomy is performed. When it is found that the tumor itself is inoperable, i. e., cannot be completely removed surgically, then the emanation tubes are inserted into the tumor, and this is followed by the necessary palliative surgical procedures. The laparotomy incision is immediately sutured. The method produces no general deleterious effect on the organism, and at the same time in every instance causes a shrinkage of the tumor mass. The method seems, therefore, to be of great promise, and should be tested by all surgeons and radiotherapeutists who are in a position to obtain the capillary tubes of radium emanation.

## TUBERCULOSIS OF THE TESTIS IN A CHILD

Joseph S. Eisenstaedt, Chicago (Journal A. M. A., Dec. 16, 1922), records the history of a child, aged 3 years, who had a diffuse productive tuberculosis of the testis. Microscopic examination revealed the fact that the tuberculous process was limited to the testis. This is just the opposite from the condition found in the adult.

## ULCER OF THE STOMACH AND DUODENUM

Dudley Roberts, New York (Journal A. M. A., Dec. 30, 1922), believes that the frequency of peptic ulcer has been greatly underestimated, and the relative danger of the lesion greatly exaggerated, because only the more severe complicated cases have come under observation or have been recognized through clinical study. Until more definite information is at hand as to the cause of the lesion and the reasons for its stubborn persistence, a specific cure and a satisfactory routine for the handling of these cases can hardly be worked out. Meanwhile, treatment must be individualized on the basis of the site and the character of the lesion as shown by roentgen-ray study; the subsequently demonstrated change in the lesion; the amount of disability; and the presence of complication, such as hemorrhage, perforation and stenosis.

## MANAGEMENT OF HEAD INJURIES WITH REAL OR POTENTIAL BRAIN DAMAGE

Charles E. Dowman, Atlanta, Ga. (Journal A. M. A., Dec. 30, 1922), urges that all head injuries should be carefully studied and the type of injury properly estimated before the institution of any particular treatment. No treatment is of avail in those cases of massive brain injury presenting evidence of rapid exhaustion of the medullary centers. The treatment of middle meningeal hemorrhage can be greatly facilitated by ligating the external carotid artery. The technic advised by Cushing in the treatment of war wounds of the skull and brain should be used in the treatment of those cases of brain injury in which there is localized brain contusion. Subtemporal decompression is still the treatment of choice in cases of brain injury when there is evidence of gross brain laceration, and the patients are yet well within the so-called period of medullary compensation. Saturated magnesium sulphate solution by mouth will prevent the occurrence of increased intracranial pressure due to fluid accumulation and thereby prevent the necessity of late operation in many cases of brain injury in which immediate operative intervention does not seem to be indicated. Saturated solution of sodium chlorid intravenously is of inestimable value in relieving acute increased intracranial pressure due to fluid accumulation occurring several days after head injuries, with definite brain injury.

## NAVY ADOPTS NEOARSPHENAMINE

The following letter of Rear Admiral E. R. Stitt, Medical Corps, United States Navy, was approved on August 17, 1922, by the Bureau of Medicine and Surgery, in charge of Rear Admiral W. C. Braisted, Washington, D. C., and published for the information of the medical officers of the United States Naval Service, in the U. S. Naval Medical Bulletin, October, 1922.

To the Bureau of Medicine and Surgery:

"Subject: Recommendation that neoarsphenamine be substituted for arsphenamine in connection with use on board ships and at certain stations of the Navy.

"1. I would recommend that the use of arsphenamine be discontinued on board ships of the Navy and in its place to substitute neoarsphenamine. This same recommendation would apply to stations and smaller hospitals.

"2. In the larger hospitals where facilities for the administration of arsphenamine are satisfactory, the choice between arsphenamine and neoarsphenamine should be left to the discretion of the commanding officer.

"3. This recommendation is made for the following reasons:

(a) In discussing fully this matter with the director of the hygienic laboratory, he is of the opinion that most of the accidents attending the use of arsphenamine have been connected with errors in technic. In view of the simplicity of technic when using neoarsphenamine, many untoward results would be eliminated.

(b) In the clinic of the Brady Institute, neoarsphenamine is used exclusively, and Doctor Young and his associates are unable to note any lessened therapeutic efficiency with this drug than when arsphenamine is used."

## ANNOUNCEMENT

The Seventh Annual Clinical Session of the American Congress on Internal Medicine will be held in the amphitheatres, wards and laboratories of the various institutions concerned with medical teaching, at Philadelphia, Pa., beginning Monday, April 2, 1923.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address inquiries to the Secretary-General.

Sydney R. Miller, President,  
Baltimore, Md.

Frank Smithies, Sec'y.-Gen'l.,  
1002 N. Dearborn Street,  
Chicago, Ill.



DR. ALBERT EWING DAVENPORT  
State Commissioner of Health For Oklahoma

# THE JOURNAL

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### EDITORIAL

#### IN APPRECIATION OF THE COUNTY SECRETARY.

This means is taken to gratefully acknowledge the prompt cooperation on the part of our county secretaries who by their energy placed upon the 1923 membership rolls nearly 1300 names during the month of January. This number exceeds any before recorded for the same period and taking into consideration the situation in many parts of the State it is to be considered an achievement of no small proportions.

With the exception of those counties which have never had more than a perfunctory organization, no meetings except on rare occasions, requiring constant re-

minder of the importance of the month of January to the individual member, the remainder responded with alacrity. Several start the year with an absolutely new slate, carrying all old members with their new accretions. That this is appreciated is stating the matter mildly. The office of State Secretary is always overworked during the first few months of the year, the trials and griefs are many, so this is written to say WE THANK YOU.

#### OUR ANNUAL MEETING—TULSA, MAY 15, 16, 17.

Dr. Fred Y. Cronk, Tulsa, has been appointed General Chairman for the Tulsa meeting, and shortly, sub-chairmen will be named and announced.

It is to be hoped that every physician contemplating attendance at this meeting will not neglect the important matter of making his hotel reservations at an early date, for Tulsa is a City full of people, often so crowded that getting any sort of accommodations is next to impossible.

The necessity for everyone proposing to read a paper at this session making announcement of his subject and early preparation of his matter that it may have inclusion in the May issue cannot be too strongly urged. The program of the meeting will be published, if possible, in the May issue. To have that issue out in time for circulation demands that matter for its pages be prepared and in the hands of the various Section Chairman or in the JOURNAL office by April 15, if that is possible. Opportunity for alteration, additions and corrections will be given everyone up to the last possible moment. However, much last minute haste and waste incident to our Annual Meeting may be avoided by an early clearing of professional decks for action.

#### THE OKLAHOMA COMPENSATION LAW AND THE PHYSICIAN.

Rumors are rife that there will be attempts made during the session of the Legislature to amend the Workmen's Compensation Law. Unofficially, it is said that the measures may seek to give more to the injured employe, but, at least less or no more to the physician attending him. The suggestion that it was rather rough on the physician to tie him to a serious, long drawn-out surgical case, yet limit the time

for which he was to receive remuneration for his services as well as haggle over the amount, did not seem to create any particular sympathy for the physician. Perhaps that is because he has and controls few votes, often not even using his own intelligently for the benefit of the profession from which he derives a livelihood. It is well to keep in mind, too, that heretofore practically every law enacted on this score has emanated from sources almost wholly callous to the possibilities of justice or injustice contained in the enactment so far as the physician was concerned. While we are reviewing the past experiences it is also well to recall that "Eternal vigilance is the price of liberty" and that the practical application of this warning should induce as many physicians as possible to write their representatives for information, especially asking just where the physician tied up to a Compensation case will be should the law be changed. We need not ask that favoritism be shown us, be we should ask that a fair remuneration be given the man who does the work.

#### ABOUT BREEDING.

It was pointed out by Carl Pearson several years ago that one-half of the births in England were being produced by one fourth of the population, and that this extra-prolific one-fourth was the lowest fourth judged by intellectual and social standards. As a matter of fact, most civilized nations today are recruiting their populations from the bottom layers of society. They are not having their peoples well-bred. While their births are selective they are based on the worst possible selection. It may be urged that this makes little difference in countries where men are born free and equal and have equal opportunities for development. There are ample reasons for believing, however, that success in the multifarious affairs of life indicates superior mental and physical capacity. It is a well known fact that the birth rate of the well to do and intelligencia of all civilized countries has been steadily shrinking for the past half century, while those groups content to follow in the rear, the less energetic and ambitious, the unfit mentally and physically, the camp followers, the ne'er-do-wells, breed to their hearts' content. The biological law that progress in the evolutionary scale is made at the expense of fecundity is thus stated by Herbert Spencer:—"The fertility of any species

varies inversely with the development of the individuals of that species." There seems to be ground for believing that this law is as applicable to the individual as to the species, and that the higher his intellectual development the less becomes his power of procreation. Indeed, Gide, in his discussion of Malthusianism, expresses the hope that as the race progresses mentally and morally its fecundity will slacken. This will never effect the lower strata of society, however, and only the high death rate induced by the conditions under which they live and multiply saves civilization from being engulfed by the seething precipitate from below. These are the people who are multiplying and replenishing the earth today. Now what do we see in these United States of America? The graduates of Harvard, our most famous school of learning, barely perpetuating themselves, while 1193 graduates of Bryn Mawr in twenty-five years produced 263 girls all told. One in ten of our young men, as determined by the psychological tests for the draft, was so below par mentally that he was unsafe to send to France, and was left to do routine menial labor at home. It is from this one-tenth that our jails, our state schools and our feeble-minded institutes are recruited; but we allow them to marry and propagate themselves, and too often without the former formality. Our sickly sentimentality forbids their sterilization, or even segregation, and even invites them to make laws for us by giving them the ballot. The Spartans, with our knowledge, would have done far better. They would at least have rendered them incapable of propagating themselves and applied Mendelian principles to human breeding. Are we less wise than the Spartans?

—S. E. Cook.

Nebraska Med. Journal, Feb. 1923.

#### *Editorial Notes—Personal and General*

Okmulgee County Medical Society at the last January meeting formed plans to have a club room and medical library. The meeting was the annual "get together" affair of the society. The viands for the occasion were provided for by Drs. W. W. Stark, W. C. Vernon and L. E. Torrance. The twenty-one physicians present heard a radio program after the meeting.

Dr. D. Long, who has been connected with the State Tuberculosis Hospital at Talihina, has returned to his old home at Duncan.

Dr. F. L. Carson, of Shawnee, spent two weeks of January in Mexico City visiting various hospitals of that country and "other places" of interest.

Dr. G. S. Baxter, of Shawnee, has just completed a handsome new residence "out on Broadway" and is now living therein.

Dr. J. E. Walker, Shawnee, has been re-appointed County Superintendent of Health for Pottawatomie County by Dr. E. A. Davenport.

Dr. G. E. Hartshorne, Tulsa, has been appointed Superintendent of Health of Tulsa county to succeed Dr. C. L. Reeder.

Dr. W. C. Sanderson, Henryetta, that city's oldest physician in point of residence has been appointed health officer for Okmulgee county.

Dr. F. L. Walton, Muskogee, has been appointed health officer for Muskogee county, succeeding Dr. F. W. Ewing.

Dr. H. E. Huston, Cherokee, has moved to Watonga.

Dr. Catherine Brydia, Ada, Pontotoc County, holds the distinction of being the first woman physician to be appointed Superintendent of health by Governor Walton.

Drs. W. Albert Cook, C. L. Reeder, R. S. Wagner and F. C. Meyers, Tulsa, have been appointed board of health to cooperate with the city Superintendent.

Dr. Robert S. Love, Oklahoma City, claims to be the champion victim in a contest when it comes to who lost most. Recently, while attending a banquet, thieves drilled through his locked car door and stole more than \$6,000 worth of radium. Four days later they finished their operations by stealing the car.

Drs. Elizabeth Grantham and W. S. Cherry, Alva, entertained the members of the County Medical Association and their wives with a seven o'clock dinner January 23.

Dr. J. E. Arrington, Frederick, has been appointed health officer for Tillman County.

Dr. C. C. Richards, Marlow, is the new health officer for Stevens County.

Dr. A. E. Davenport, State Commissioner of Health, made the following announcement on assuming the duties of his office.

"On assuming my duties as State Health Commissioner of Oklahoma, it is my desire to make the Department bigger and better and more efficient than ever. To accomplish this end I earnestly wish to have the hearty cooperation of every medical man in the state, whether or not he is an acknowledged Health Officer.

"The doctors are the ones, who more than anyone else, come in contact with the sanitary and hygienic conditions over the state and I want to assure them that this office stands ready at all times to listen to any suggestion, and to give any advice in our power along these lines.

"Doctors and others will find a hearty welcome awaiting them at the office of the State Board of Health and any time when visiting Oklahoma City, we wish you to visit us."

The Board of Censors, Tulsa County, reported their findings as "guilty" in the cases of Drs. R. A. Douglas and C. M. Vaughn, charged with advertising in violation of the By-Laws. "Blood will tell" read a part of the advertisement, setting forth the virtues of Abrams Electronics.

Dr. W. T. Mayfield, Norman, and Miss Delores Burrell, Santa Anna, California, were married in January.

Drs. G. W. Wiley and J. L. Day, of Norman, visited the New Orleans Clinics for three weeks in January.

The Tulsa County Medical Society met at the Oklahoma Hospital on Jan. 22, at the invitation of Dr. Clinton.

After routine business was disposed of, among which was answering the U. S. Public Health questionnaire in regard to the venereal situation, the meeting was turned over to the Hospital Staff.

Drs. Osborn and Diefenbach reported a case of hemophilia in the new born which resulted in death.

Dr. Butler reported a case of gall bladder infection in a one year old child which resulted in death.

Mr. Phil Davis, corporation counsel, briefly explained recent Supreme Court decisions that affect the status of the State Industrial Commission and explained that the Commission is practically powerless to award physicians their charges and enforce the payment of same. He suggested that we keep in touch with the Legislature and see that a bill is passed in which we physicians can get our compensation without recourse to the common law courts.

Dr. Lee W. Farris, of the Staff, read a paper entitled "It is the Little Things That Count in Emergency Cases." This was followed by Dr. L. H. Carlton's paper on "Acute Pancreatitis."

The hour being now late, further papers were dispensed with and welcome and delicious refreshments were served. This ended a well attended meeting which was enjoyed by everyone present.

## THE CULT FAMILY

Perpetrated on the members of the Tulsa County Medical Society by Dr. T. W. Stallings, December 11, 1922.

Oh, the Cult family is a rare family; rare Birds.

For the "Osteo" has a "massage" for every ache, No matter where's the trouble, fembro, tarso or pate,

And the "Chiro" knows the dislocated vertebrae, From ebonized dome to coccyx, need "adjustment," they say.

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When ills fall about you with a clatter, Then the "Practitioner" advises, "Mind over Matter,"

Thus for every ailment under the sun The Cults have a remedy for every one.

So, what need of the Conservative M. D., Where there's the Liberal with his Cult family?

Why not dispense with the "Doctor of Sense," And depend on the Cult and the Liberal M. D.?

## STANDING COMMITTEES.

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**Legislative**—Drs. A. K. West, Majestic Bldg., Oklahoma City; J. M. Byrum, Shawnee; McLain Rogers, Clinton; C. A. Thompson, Muskogee.

**Hospitals**—Drs. Fred S. Clinton, Chairman, Oklahoma Hospital, Tulsa; M. Smith, Colcord Bldg., Oklahoma City; C. A. Thompson, 508 Barnes Bldg., Muskogee.

**Medical Education**—Dr. Wann Langston, Chairman, University Hospital, Oklahoma City; Dr. A. B. Chase, Colcord Bldg., Oklahoma City; Dr. W. A. Fowler, Oklahoma City.

**Tuberculosis, Study and Control**—Drs. Leila Andrews, Chairman, Colcord Bldg., Oklahoma City; Horace T. Price, 303 Palace Bldg., Tulsa; C. W. Heitzman, 615 Barnes Bldg., Muskogee.

**Health Problems In Education**—Drs. J. T. Martin, Chairman, 200 W. 14th; J. R. Burdick, Oklahoma City, Okla.; A. S. Risser, Blackwell; Edw. F. Davis, 343 American National Bldg., Oklahoma City.

**Cancer, Study and Control**—Drs. LeRoy Long, Chairman, Colcord Bldg., Oklahoma City; E. S. Lain, Patterson Bldg., Oklahoma City; Gayfree Ellison, State University, Norman; McLain Rogers, Clinton.

**Venereal Disease Control**—Drs. W. J. Wallace, Chairman 830 American National Bldg., Oklahoma City; Ross Grosshart Tulsa; J. H. Hayes, Enid.

**Vision, Conservation**—Drs. W. Albert Cook, Chairman Palace Bldg., Tulsa; D. D. McHenry, Colcord Bldg., Oklahoma City; John R. Walker, Enid.

**Committee on Benefactions**—Drs. L. J. Moorman, Chairman, 1st Nat. Bldg., Oklahoma City; J. H. White, Muskogee; R. V. Smith, Daniel Bldg., Tulsa; L. A. Turley, Norman; McLain Rogers, Clinton.

## COUNCILORS AND THEIR COUNTIES.

**District No. 1.** Texas, Beaver, Cimarron, Harper, Ellis, Woods, Woodward, Alfalfa, Major, Grant, Garfield, Noble and Kay. A. S. Risser, Blackwell. (Term expires 1924.)

**District No. 2.** Dewey, Roger Mills, Custer, Beckham, Washita, Greer, Kiowa, Harmon, Jackson and Tillman. L. A. Mitchell, Frederick. (Term expires 1923.)

**District No. 3.** Blaine, Kingfisher, Canadian, Logan, Payne, Lincoln, Oklahoma, Cleveland, Pottawatomie, Seminole and McClain. Dr. Walter Bradford, Shawnee. (Term expires 1925.)

**District No. 4.** Caddo, Grady, Comanche, Cotton, Stephens, Jefferson, Garvin, Murray, Carter, and Love. J. T. Slover, Sulphur. (Term expires 1923.)

**District No. 5.** Pontotoc, Coal, Johnston, Atoka, Marshall, Bryan, Choctaw, Pushmataha and McCurtain. J. L. Austin, Durant. (Term expires 1925.)

**District No. 6.** Okfuskee, Hughes, Pittsburg, Latimer, LeFlore, Haskell and Sequoyah. L. S. Willour, McAlester. (Term expires 1924.)

**District No. 7.** Pawnee, Osage, Wahsington, Tulsa, Creek, Nowata and Rogers. Chas. H. Ball, Tulsa. (Term expires 1923.)

**District No. 8.** Craig, Ottawa, Delaware, Mayes, Wagoner, Cherokee, Adair, Okmulgee, Muskogee and McIntosh. P. P. Nesbitt, Surety Bldg., Muskogee. (Term expires 1925.)

OFFICERS OKLAHOMA STATE MEDICAL ASSOCIATION  
1922 - 1923

President, 1922-1923, Dr. McLain Rogers, Clinton.  
President-Elect, Dr. Ralph V. Smith, Daniel Bldg., Tulsa.  
First Vice-President, E. S. Ferguson, Oklahoma City.  
Second Vice-President, W. A. Tolleson, Eufaula.  
Third Vice-President, E. B. Dunlap, Lawton.  
Secretary-Treasurer-Editor, Dr. Claude Thompson, 508 Barnes Bldg., Muskogee, Okla.

Associate Editor, Councillor Representative, Dr. P. P. Nesbitt, 710 Surety Bldg., Muskogee.

Meeting Place, Tulsa, May 15-16-17, 1923.

Delegates to the A. M. A.: Dr. W. Albert Cook, Palace Bldg., Tulsa (1923-1924); Dr. J. M. Byrum, Shawnee (1922-1923).

## STATE BOARD OF MEDICAL EXAMINERS.

W. E. Sanderson, Altus; W. T. Ray, Gould; O. N. Windle, Sayre; J. E. Farber, Cordell; D. W. Miller, Blackwell; J. M. Byrum, Shawnee, Secretary; J. E. Emanuel, Chickasha.

Reciprocal relations have been established with Missouri, Colorado, New Jersey, California, on basis of examination only. Arkansas, Georgia, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Tennessee, Texas, Vermont, Virginia, Washington, Wisconsin, West Virginia, on basis of a diploma and a license without examination in case the diploma and the license were issued prior to June 12, 1908.

Meetings held on first Tuesday of January, April, July and October, Oklahoma City. Do not address communications concerning State Board examinations, reciprocity, etc., to the Journal or to Dr. C. A. Thompson, Secretary, but to Dr. J. M. Byrum, Shawnee, Secretary of the Board.

## CHAIRMEN OF SCIENTIFIC SECTIONS:

General Medicine, Neurology, Pathology and Bacteriology: Dr. H. T. Ballantine, Muskogee.

Genito-Urinary, Skin and Radiology: Chas. H. Ball, Tulsa, Chairman; Dr. J. Z. Mraz, Oklahoma City, Secretary.

Surgery and Gynecology: Dr. Wm. P. Fite, Muskogee.

Eye, Ear, Nose and Throat: Dr. W. T. Salmon, Oklahoma City; Dr. W. E. Dixon, Secretary, Oklahoma City.

Obstetrics and Pediatrics: Dr. T. C. Sanders, Shawnee, Chairman; Dr. George R. Osborne, 302 Daniels Building, Tulsa, Secretary.

## CLASSIFIED ADVERTISEMENTS

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Beaver		
Beckham		
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Creek	W. G. Bisbee, Bristow	E. W. Reynolds, Bristow
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Dewey		
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Haskell		John Davis, Stigler
Hughes		
Jackson		W. P. Rudell, Altus
Jefferson		D. B. Collins, Waurika
Johnson		
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Kingfisher		
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Lincoln	A. M. Marshall, Chandler	C. M. Morgan, Chandler
Logan	C. B. Barker, Guthrie	J. L. Houseworth, Guthrie
Love		
Major		Elsie L. Specht, Fairview
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\*Names of officers for 1923 will be added to above as they are reported for the year.



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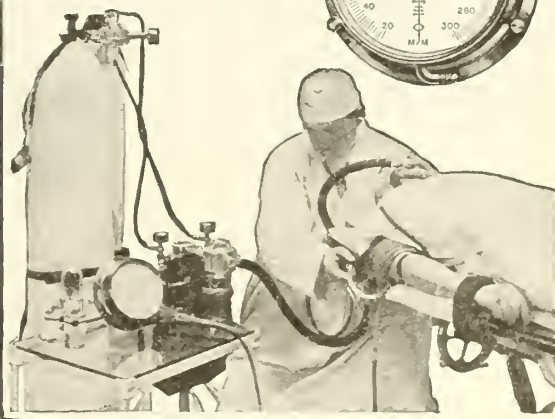
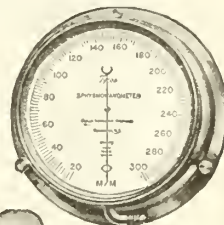
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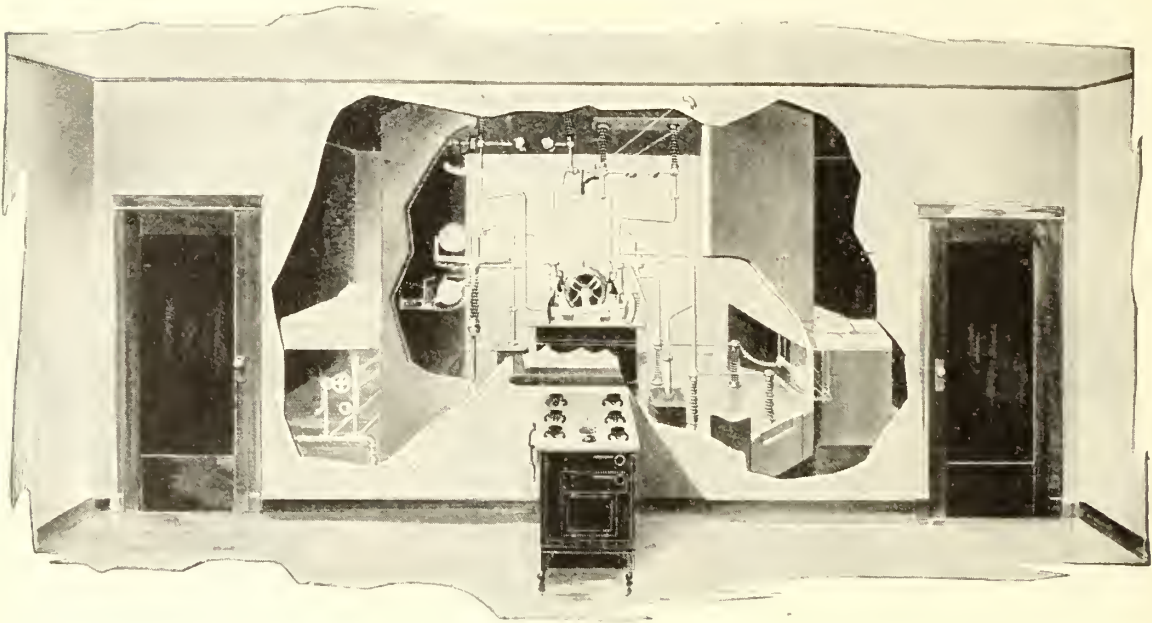
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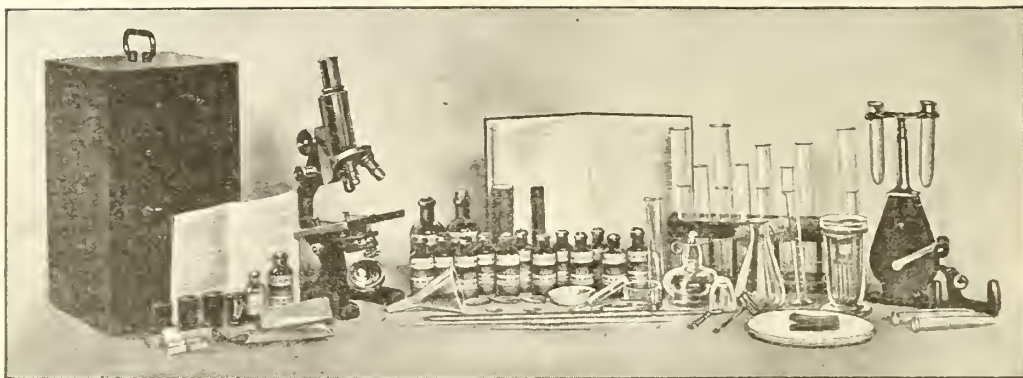
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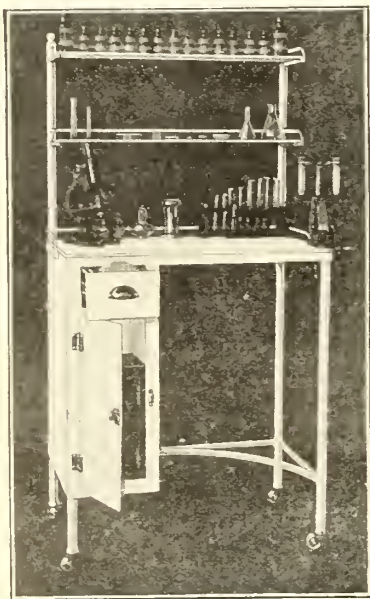
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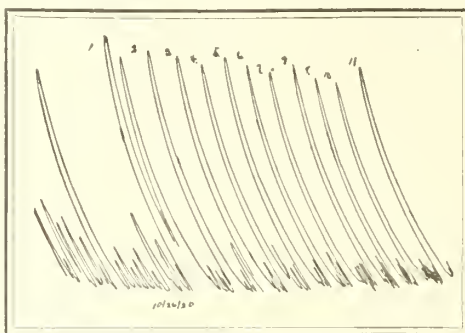
ed to avoid errors that would vitiate the results. In the Oxytocic test, for example, uteri from several animals may have to be tried before one suitable for the purpose is found. Excessive irritability due to congestion and inflammation of the musculature renders

the specimen unfit for use. Likewise to be rejected are those muscle strips that fail to register equal contractions from like doses of a standard extract. And in every case both standard and test samples of Pituitrin must be sufficiently dilute to obviate the occurrence of the maximum contraction

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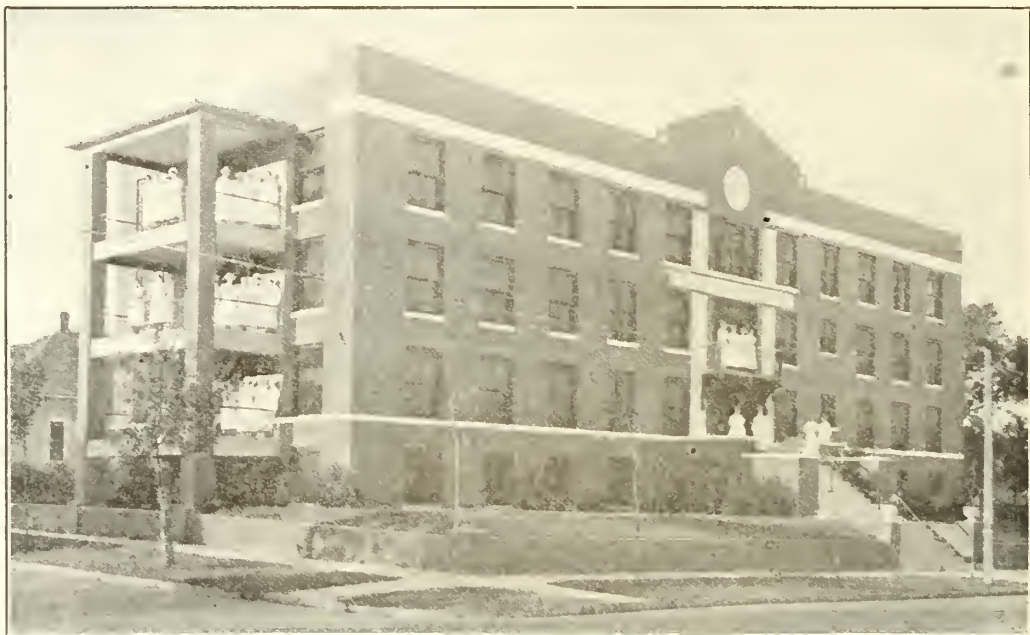
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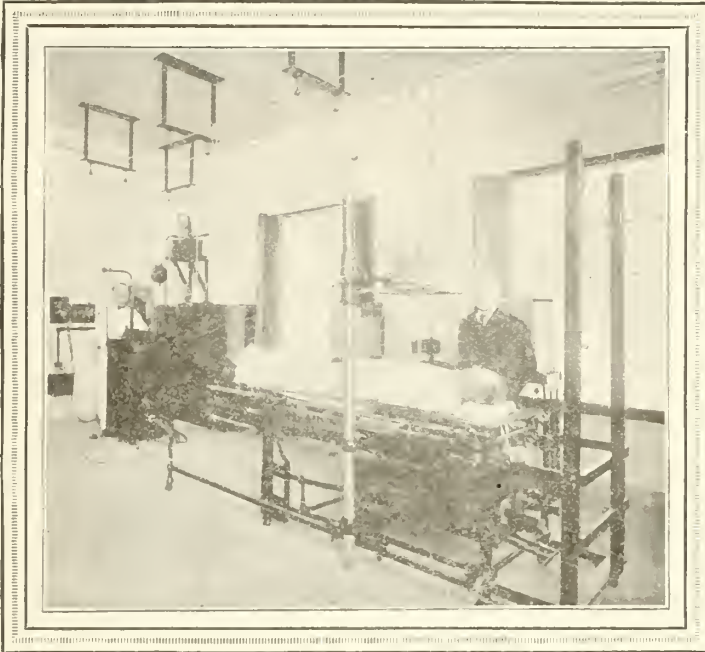
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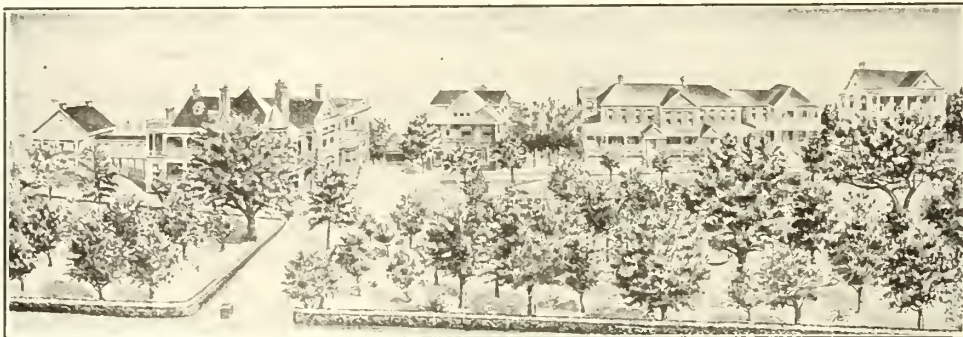
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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., MARCH, 1923

NUMBER 3

### CHOLECYSTITIS

O. W. RICE, M. D.,  
Alderson, Oklahoma

The most common "itis". Due to a descending infection. Classification. Best treatment not always surgical. Purgation contra-indicated.

Maid of Athens, ere we part,  
Give, Oh, give me back my heart!

If Lord Byron had lived one hundred years later, I believe he would have written:

Maid of Athens, ere we sever,  
Give, Oh, give me back my liver!

If he were taking leave of that Athenian maid today, he would probably say:

Maid of Athens, your words are all flatter,

Give, Oh, give me back my gall-bladder!

The seat of our affections may be in the heart, but there is very strong evidence pointing to a spot under the right costal arch, to say the least a bilious individual has no affection, he has an infection—He has Cholecystitis.

After a quarter of a century of semi-intelligent observation, I am convinced that Cholecystitis is a very common "itis" if not the most common that we are called upon to treat. Tabulate your findings in your next fifty adult patients and see if the majority of the arrows don't point in that direction. There is probably no other problem in border line medicine and surgery that can vie with the inflammatory gall-bladder diseases for interest and importance. The frequency of this disease is due in part to the anatomy and physiology of the parts involved. Micro-organisms gaining entrance to the body from whatever source, soon arrive at the liver and are excreted along with the bile, travel to the gall-bladder, the first stagnant pool, where they find conditions favorable for multiplication and infection, the resulting inflamma-

tion may extend to the bile ducts, but the primary focus is much more frequent in the gall-bladder and is responsible for all gall stones except those composed of pure cholesterin. Chemicals introduced into the blood travel to the gall-bladder in a remarkably short time, causing an inflammation. Mann experimenting with Dakin's solution on the dog found that 5 to 8 c.c. injected into the blood caused a violent inflammation of the gall-bladder in a few minutes. The same results were obtained when the cystic duct was ligated, proving that the chemical traveled through the blood direct to the gall-bladder and not by the way of the liver and bile. Micro-organisms may sometimes do likewise.

The causes of cholecystitis, like that of most other diseases, are divided into two classes, the predisposing and the exciting. The predisposing causes are:

1. Stagnation of bile in the gall-bladder, due to sedentary life, tight lacing, vicerop-tosis and abdominal distention.
2. Stone in the gall-bladder.
3. Previous attacks of inflammation. The more severe forms are usually super-imposed on chronic cholecystitis.
4. Injury may reduce the resistance of the gall-bladder and so allow micro-organisms to become active.

The direct causes. Infection of the gall-bladder may arrive by a descending route, the organisms being brought by the hepatic artery or by the portal vein; by the ascending route, micro-organisms passing up the common and cystic ducts from the duodenum, and by the transperitoneal infection, when the gall-bladder and some other part of the alimentary tract are inflamed and adhered. An ascending infection may occur in case of parasitic invasion of the common bile duct, for example, by round worms, and in cholangitis due to carcinoma of the biliary papilla. As the empty duodenum is usually sterile an ascending infection would only occur when it was inflamed. Authorities are agreed that the descending route

by way of the hepatic artery or by the portal vein is the usual one, and that ascending infections play a very minor part in cholecystitis. The infections leading to gall-bladder inflammation, may be:

1. Haemic infections, such as pyemia, septicaemia, pneumococcemia, influenza, and micro-organisms absorbed from foci in the tonsils, at the root of teeth and other parts of the body, may reach the gall-bladder by the blood stream and infect its walls.

2. Alimentary diseases. Appendicitis and cholelithiasis are often combined and the relation between them is still a question "Sub Judase," the usual belief is that the appendicitis is primary and provides micro-organisms which reach the liver by the portal blood and are then excreted into the bile and so reach the gall-bladder and infect it.

The most plausible theory to me is that they both be simultaneously infected from the same foci. Enteric fever may cause infection of the gall-bladder, either from the early septic state, or from the intestinal lesions.

At the Mayo Clinic, it has been found that cholecystitis complicated with stones, is nearly four times as frequent in women as men. Cholecystitis, without stones, more than twice as frequent, also that 90 per cent of such women have borne children and have had the first attack in close relation to a pregnancy. This, they account for, by the fact that the cholesterol content of the blood is much increased during pregnancy. It seems to me that another factor would enter strongly here. It is a well known fact that a good percent of women receive injuries, more or less extensive, to the birth canal during child-birth. It is a further fact that a good percent of such wounds become infected, the majority with a very mild infection which nature is able to overcome in a short while, others with a more virulent infection, which results in septicaemia and requires all of nature's resources to overcome or combat. In all of these infections, micro-organisms certainly reach the liver and are excreted with the bile, reach the gall-bladder and may infect it, and at a time when the patient has so many other troubles this might go unobserved, and after the fire was extinguished in other parts of the body, would remain smouldering here, to be heard from later.

### BACTERIOLOGY

Numerous micro-organisms may set up cholecystitis. In the past typhoid, para-

typhoid and colon bacilli have been thought to be the most important. More recent observers are inclined to lay more of the blame at the door of some type of the streptococcus and believe this organism is responsible for the real damage to the gall-bladder and that often the typhoid and colon bacilli are secondary invaders. Later non-surgical drainage may determine the real cause in every case, still since the streptococcus invades the bladder wall, this organism is less apt to be thrown out by the Doyne-Meltzer reflex, while the other organisms more content to remain and multiply in the bile, will be captured and accused of the crime.

### CLASSIFICATION

There are several forms of cholecystitis, and they have been variously classified. That of Sir Humphrey Rolleston, which constitutes a progressive pathological series passing into one another, seems to be the best. The forms he describes are:

1. Catarrhal, Acute Non-suppurative, Suppurative, and Chronic Cholecystitis.

Catarrhal cholecystitis, which is divided into acute, sub-acute and chronic. This is due to a mild infection, facilitated by imperfect drainage. There may be present a pure cholesterol stone. In these varieties, the external appearance of the gall-bladder is normal. In the sub-acute there is a velvety appearance of the mucosa, and the bile is more viscid than normal. In the chronic catarrhal—the most common variety of cholecystitis—the mucous membrane shows a number of yellow specks, and from their resemblance to strawberry seeds, have been called, by McCarty, the strawberry gall-bladder. The main importance of chronic catarrhal cholecystitis, is that it favors the onset of severe acute cholecystitis, which it generally precedes.

Acute non-suppurative cholecystitis follows acute or chronic catarrhal cholecystitis, or chronic cholecystitis. Externally, the serous coat of the distended gall-bladder is dulled from fibrine and may be adhered to adjacent viscera. The mucous membrane is swollen, congested, and may be eroded. The cystic duct is often blocked by swelling of its mucous membrane.

Suppurative cholecystitis is divided into acute suppurative cholecystitis and chronic empyema of the gall-bladder. Acute suppurative cholecystitis is a further stage of cholecystitis, and may pass into phlegmonous and gangrenous cholecystitis. It is usually associated with the presence of gall

stones in the gall-bladder. It is very likely to occur when a calculus is impacted in the cystic duct. Empyema of the gall-bladder may follow an acute cholecystitis or chronic mucocele of the gall-bladder.

Chronic cholecystitis is a further stage of chronic catarrhal cholecystitis, and is usually associated with and largely responsible for the presence of calculi and their early symptoms. Externally, the gall-bladder is often adherent to adjacent parts, and its surface is rough and much thickened. The mucous membrane has mainly disappeared and its place taken by scar tissue. The adjacent lymphatic glands are chronically inflamed and the inflammation spreads by the lymphatics to the head of the pancreas.

### SYMPTOMS

In the three catarrhal forms of cholecystitis, if not associated with gall-stones, they may be clinically latent, or with only mild gastric disturbances. In the acute non-suppurative cholecystitis, the onset may be sudden, following some indiscretion in diet, or may be gradual. There are signs of local peritonitis in the region of the gall-bladder, pain, tenderness, rigidity of the right rectus. If the cystic duct is obstructed, there will be attacks of biliary colic, and the pain may be referred to the right iliac fossa. The deep tenderness may be most prominent at the tip of the right ninth costal cartilage, and cutaneous hyperesthesia may be present in the eighth and ninth dorsal segments. The gall-bladder may be palpably and even visibly enlarged. Vomiting is common and sometimes very persistent. There is fever, some increase in pulse rate, and leucocytosis. The attack usually passes off in ten days. It must be differentiated from gall stones which is sometimes very difficult. In gall stones, the pain is more excruciating, and usually requires morphine, but it disappears more abruptly, while in cholecystitis, the swelling and peritonitis is greater and the pain and soreness, usually gradually disappears in the course of several days, rarely requires morphine.

In suppurative cholecystitis, the local manifestations are the same as in acute cholecystitis, but the constitutional symptoms are more severe—the pulse rate, temperature and leucocytosis are all higher than in acute cholecystitis. There may be enlargement of the spleen and albuminuria. Perforations may take place and give rise to local and general peritonitis. When this occurs the patient usually gets easy, the

pulse rate becomes more rapid, and the abdomen much distended. Phlegmonous and gangrenous cholecystitis are further stages of extreme examples of cholecystitis. This is caused by a highly virulent infection blocking of the cystic duct, preventing drainage and increasing the tension, and interfering with the blood supply by thrombosis or torsion. In this peritonitis is first local, but soon becomes general with toxemia. It is often impossible before operation, to locate the primary focus of infection. It may closely resemble fulminating appendicitis.

In chronic cholecystitis, the symptoms vary. There may be recurrent attacks of pain, resembling biliary colic. The gall-bladder may be tender on palpation. Gall stones are commonly present. The symptoms of chronic cholecystitis alone, and that complicated by gall-stones are practically the same, and a differential diagnosis between the two conditions is usually impossible, only in certain cases attended with severe attacks of colic and followed by common duct obstructions. Fortunately it is of little practical importance as the two conditions are so often associated and the treatment is essentially identical. In cases with adhesions, the symptoms may be entirely gastric. Dyspepsia, due to chronic cholecystitis, resembles that due to chronic appendicitis, and is most resistant to ordinary treatment. There may be symptoms due to toxic or microbic absorption, such as arthritis, phlebitis, neuritis and myocarditis. In the absence of any local evidence that the gall-bladder is affected, the diagnosis is most difficult. It seems to me that non-surgical drainage, if practical at all, would here be at its best.

### TREATMENT

There are some who believe that cholecystitis belongs in the same class with appendicitis, and that the treatment is wholly surgical. In reference to the latter, of course, we are all agreed, there is never but one drug indicated and it is not to be injected until the diagnosis is made, and the patient is on the way to the operating table, be that in his home, or in the hospital. This same plan of treatment applies to some forms of cholecystitis, viz., acute suppurative, phlegmonous and gangrenous C. chronic empyema of the gall-bladder, and chronic cholecystitis, especially when associated with stones.

There are other forms, and they are by

far the most numerous, that respond to medical treatment and the ultimate results are far superior to those obtained by surgery in this type of cases. The catarrhal forms, the acute non-suppurative and cholecystitis, occurring in conjunction with acute infectious diseases, are best treated by non-surgical means. In these perforations are rare. The infrequency of this accident, and the usual favorable termination, make it seem wiser to persist in local and medicinal measures of relief, than to resort to operative intervention, which in the presence of an acute infection is attended with greater danger than is the disease if left to itself. A cure when effected by non-surgical means, has the advantage of leaving the gall-bladder in its normal position, or nearly so to perform its normal function, while on the other hand, we would leave no gall-bladder or one whose fundus was fixed to the abdominal wall which frequently add to the impairment of function and still further increase the suffering of the patient. With this in mind, Chas. Mayo made the following statement: "I believe that it is a debatable question whether some of the milder cases of cholecystitis should not be considered medical instead of surgical." In cases of acute cholecystitis, complicating gall-stones, it may also be advisable to delay operative treatment until the acute symptoms have subsided. Others must be treated medically on account of the presence of complicating conditions which prevent surgical operation. In other cases, on account of the uncertainty of the diagnosis, medical treatment will for a time seem preferable.

The treatment is diet, drugs and possibly non-surgical drainage. The condition of the gastro-intestinal tract demands restriction of diet and limitations of food to the simplest and most digestible forms. When nausea and vomiting are pronounced, abstinence from food for a day or two is desirable. Later, gradual resumption of simple foods is desirable. The diet that seems most to contribute to the comfort of patients, is one in which the carbohydrates are abundant, while proteids and especially fats, are reduced to a minimal amount. Small meals at frequent intervals, are to be preferred to one or two large meals daily. Acids, such as vinegar and uncooked fruits, are likely to provoke painful attacks.

Local measures, such as the application of moist fomentations, stupes and the like

give the greatest comfort and seem to have some value in relaxing the spasm of the ducts and permitting discharge of the retained secretions in the gall-bladder. In all acute conditions of the gall-bladder and ducts, cathartics and purgatives of all kinds, in my opinion, are as strongly contraindicated as in appendicitis. In fact, they should never be given in any acute condition in the abdomen, and are much abused in general, if they should act, which action would be strongly opposed by nature, the only good that could come from such action, would be to dislodge the contents of the lower bowel and occasion relief of the distended abdomen. This can better be done with a soap water enema. We cannot overcome a spasm by force, rather by relaxation. Morphine and atropine hypodermatically, a small amount of chloroform, if necessary, with large fomentations to the right epigastrium, will cause more bile to pass, under such condition, than all of the purgatives this side of purgatory.

Drugs in an effort to disinfect the gall-bladder are hexamethylenamine given in connection with sodium salicylate and an abundance of soft water to increase the flow of bile and wash out the gall-bladder, if there is much gastric irritation, bismuth salicylate may be substituted.

Lyons non-surgical method of draining the gall-bladder and bile ducts, by introducing an Einhorn tube into the duodenum, and instilling 30 to 40 cc. of 25 per cent solution of magnesium sulphate through the tube for the purpose of causing Oddi sphincter to open and the gall-bladder to contract, causing a discharge of bile, deserves a full trial in all forms of biliary infection, especially in the early stage, a possibility of draining a badly infected gall-bladder, containing stones and with adhesions, twists or kinks, or without these complications, as against surgical drainage cannot be regarded as highly promising. Its usefulness diagnostically has great possibilities, but I doubt its benefits therapeutically. When the cathartic action of this solution is not contraindicated, why may we not expect some benefit from its use, given by the mouth while the patient is in the fasting state? Sodium phosphate has been used in such cases for years. I always imagined I received better results from the plain phosphate than from the official effervescent, and when given in the early morning. Part of the good results, if any were obtained from the use of this drug, was

doubtless due to stimulating this reflex.

In suppurative cholecystitis, phlegmonous and gangrenous cholecystitis, the treatment is only surgical and consists in cholecystectomy as early as possible, likewise in chronic empyema of the gall-bladder, the treatment is surgical drainage. In chronic cholecystitis, whether alone or associated with calculi, which is usually the case, the prognosis is good only when the gall-bladder has been treated surgically. No intelligent person today believes that any medical means can be relied on to bring about a solution of gall stones. In chronic cholecystitis, without stones, where all possible foci have been sought and removed, and where the patient has the means and the inclination to undergo prolonged treatment, I believe, like some pelvic infections, that after passing through a somewhat stormy period the ultimate result will be a good recovery in a very large percent of cases. I have seen quite a few such recoveries I am sure. Many cases, complicated with stones, no doubt, subside under medical treatment, and remain apparently cured for years, but freedom from relapses and sequels cannot be guaranteed.

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**Discussion:** Dr. F. L. Watson, McAlester.

"Maid of Athen, ere we part,  
Give, oh give, me back my heart."  
Flapper damsel, in your flivver,  
Keep my gall, and keep my liver;  
Maid from on the Aegean sea  
It's bone dry, for you and me.

This is my imagination of Lord Byron's mutation during the century just past, or what I would divine from Dr. Rice's introductory remarks to one of the best surgical papers I have ever heard before a medical section.

That paper is as full of good sound common sense and reason as the cemetery is of people whose doctor filled them full of purgatives, for acute inflammatory diseases of the abdomen, yet the cemetery seems to be like the road to reason, always room for a lot more.

It is customary in medical societies to thank the doctor for his very excellent, etc., I am not going to do that, it speaks for its own excellence. Every one of us should read it when it appears in the Journal; I shall not make repetition of etiology you have just listened to the last word on that, with which, I fully concur.

I shall speak of treatment from the standpoint of the surgeon, and in my mind that is the only treatment in all inflammatory diseases of the gall bladder but one, and that is surgical too.

I have reference to those milder cases wherein Dr. Rice quotes Dr. Chas. Mayo and concurs in the opinion, that these may be medical.

My own interpretation of these cases is that they are metastatic, due to focal infection and if you find and remove the focus, before the resisting power of the gall bladder wall is overcome, that these and these only, will recover without radical operation.

The essayist has well said that in selective acute cases it is some times well to wait until the highly virulent symptoms have been overcome before operating; unless you do and discriminate carefully, your mortality will be appalling.

All cases of adhesions should be operated. Cholecystectomy either under general or local anaesthesia, is the only operation in diseases of the gall bladder.

These patients get well and do not come back. Cholecystotomy is only a palliative operation and should only be used in inflammation of the pancreas where prolonged drainage is desirable, or where the patient's condition demands it on account of the hazard to life.

The cases Dr. Rice mentioned as going through stormy intervals, treated medically over long periods of time, are ultimately the most prolific source of cancer in later years, and should never be.

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## PERNICIOUS ANEMIA

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My object in reading a paper on pernicious anemia before this Section of the Oklahoma State Medical Association is to bring to your attention a disease which, in my opinion is being recognized more often now than at any time in medical history. This may be attributable to one of two factors, or both. First, with our more precise methods of diagnosis, cases either undiag-

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Read before the Section on General Medicine, Oklahoma City, Oklahoma, May 9, 10, and 11, 1922.

nosed or misdiagnosed have become accurately recognized. Second, pernicious anemia may be actually on the increase.

If the second statement be true, there is no adequate explanation, for the etiology is so obscure that we have nothing upon which to base our assertion as to the causative conditions. One may say that the strenuousness of our present modes of living burn out the vitality more quickly than formerly. That, due to associated abdominal and general disorders, the spleen and bone marrow cease their functions; or that foci of local infection are more prevalent than with our forefathers, but after all, these are only theories and lead us no place at all. But since it is generally conceded that we men in general work see more cases of pernicious anemia than we did formerly, it behooves us, as progressive doctors, to learn all we can of the cause, symptoms and treatment of this condition which both the doctor and his patient have cause to look upon with such unmitigated dread.

**DEFINITION.** Pernicious anemia is a chronic disease of unknown origin, characterized by marked constitutional changes; a decrease in both hemoglobin and blood cells. And with a fatal downward course interrupted by remissions and exacerbations of various degree and intensity.

**ETIOLOGY.** The specific cause, if there be one, is unknown. It is more common in males than females, though the difference in sex is comparatively slight. Is said to occur more commonly in middle life, but old age brings no immunity, and a few cases have been recorded occurring during the adolescent period.

Climate, and occupation may be disregarded as playing an etiological part.

Local foci, as in the teeth, have marked bearing on many of these cases and should always be looked for as a causative factor in all cases of pernicious anemia.

Hidden hemorrhage must be looked for in the intestinal tract, and frank though slight hemorrhages over a long period of time can not be discarded as probable causes in summing up the etiology of all these cases.

Hunter claims that the most frequent cause is an atrophy of the gastric secretory tubules, brought about by the constant swallowing of highly infective pus from

decayed teeth. He claims that a further indication of this condition is furnished by an extensive inflammation of the tongue.

But by no means all of the cases show any foci of infection, and we are compelled to fall back upon the theory of some obscure hemolytic poison probably located within the intestinal tract.

**PATHOLOGY.** Until late in the disease there may be few gross pathological changes. In the later months of the disease scarcely an organ escapes some marked variation from the normal. One of the first conditions recognized is usually splenic enlargement associated with anemia to a more or less degree.

The bone marrow loses its normal yellowish look, becomes red and contains large numbers of nucleated red cells. Secondary changes in the cardiovascular system giving rise to spontaneous hemorrhages, and to extreme cardiac debility, with possible spontaneous hemorrhages in the kidneys and liver.

The spinal cord changes are usually marked in the later stages. Very minute hemorrhagic foci may be noted throughout the cord. More or less sclerosis of the posterior, lateral and anterior columns is noted, and in exceptional cases degeneration of the peripheral nerves takes place.

Fatty degeneration of the heart, liver, and kidneys is found postmortem in practically all patients with hemorrhages of a greater or less degree in the spleen.

A marked deposit of iron within the liver is found in many cases.

**SYMPTOMS.** Since the condition is a chronic one, and so often associated with other diseases, particularly malaria in the South, its time of onset is rarely known and its progress is so gradual that the condition is usually well established before it becomes recognized. An intense languor, attributable to generally run down condition causes the patient to consult his physician, when upon examination a marked anemia is noted. There is no loss of flesh and scarcely any other palpable evidences of this disease are present, except occasionally an edema of the feet. The patient may occasionally note that for a long time he has been getting increasingly more nervous, and the physician may be consulted for this condition before there has been little or any change in the blood picture.

Gastro intestinal symptoms, such as a gastritis or gastro enteritis is found often, and associated with those conditions may be a marked inflammation of the tongue, causing it to be red, shiny, and smooth, flabby and extremely painful. There is usually loss of appetite, nausea, and in some cases marked vomiting, with diarrhea. The abdomen becomes tender and may be acutely so, to the extent that some abdominal surgical condition may be suspected.

Loss of weight, until very late in the disease, is not usually marked. Though it may be progressive over a long period of time, and may be marked if the vomiting and diarrhea are excessive. In the later stages of this disease the temperature may be quite high. In one of my own cases running to 104 or 105. The pulse is usually rapid, and of only moderate tension, during the febrile stage.

The respiration is little altered unless the temperature is high, or a state of delirium is present. Then it is rapid and often jerky and in the final stages may be of the Cheyne-Stokes' variety.

Delirium due to brain anemia in the acute exacerbations is often marked, and may become a deciding factor in the final attacks that brings these cases to a close. Changes in the spinal cord are often present and may be mistaken for tabes, with decreased reflexes and in some an ataxic gait. Still others will show various forms of paresthesias, such as tingling, numbness, soreness and general feelings of largeness or floating in the air, and other abnormal sensations.

Most significant of all the symptoms seen in cases of pernicious anemia is the rapid blood changes. There is usually marked and often sudden reduction in the red blood cells with a decrease, but not a corresponding one in the hemoglobin and white cells. The red cells may be as low as 1,000,000, or even 500,000. And Naigili reports one case as low as 138,000, though the average will vary between two and three millions.

The leucocytes will average about three to four thousand, though in extreme cases they may go as low as one. Cases have been recorded where the hemoglobin has dropped to ten per cent, though usually it will be found around twenty to thirty per cent and is recorded as a high hemoglobin index, due to a rapid destruction in the red cells and a less rapid destruction of the

hemoglobin. Nucleated red cells are found, and more marked poikilocytosis is seen here than in any other form of anemia.

The red cells are usually increased in size to the degree that they are known as macrocytes, though in exceptional cases the size of the red cell may be actually diminished below the normal. There is usually a fairly marked lymphocytosis to the degree that they may constitute fifty per cent of the white cells. All forms of degenerative cells have been observed in the more extreme cases. The blood platelets are usually diminished both in size and number.

During the course of the disease there occur at infrequent intervals remissions of the above conditions. The gastro intestinal symptoms improve, the blood picture looks brighter; strength and appetite grow stronger until the patient becomes convinced that he is cured, only to have at a variable time, from three months to five years, a return of the condition. Usually marked by a greater degree of intensity than the former one.

During the acute exacerbation the severity may be such that it will seem that the end must come within a few hours, when the patient will suddenly start improving and in two or three months will seem entirely recovered.

**DIAGNOSIS.** Given a patient markedly anemic, with a high color index, a low red and white count, marked degenerative changes in the blood stream, progressive weakness, with gastro intestinal symptoms the diagnosis becomes relatively simple. But in the more obscure types, with few or none of the symptoms present or clear-cut, the diagnosis is made with extreme difficulty, and may be arrived at only after the most careful study and the most painstaking exclusion.

**PROGNOSIS.** The termination to pernicious anemia is always fatal. The few exceptions, are so few that they can be disregarded in giving the prognosis to your patient or his family. It is true that there will be many cases with remissions lasting over a long period of time, some of them even as long as five years, but rarely over that. And most patients die within two or three years period. With all of its variability the cases are finally fatal.

**TREATMENT.** Since we are still in doubt as to the etiology, we are compelled

to treat individual symptoms as they arise and further carry out such line of treatment as proven valuable to us.

The treatment except for meeting such individual idiosyncrasies as will come up in our cases may be grouped under the following heads, each of which will be discussed separately.

- (1) Rest in bed.
- (2) High calory diet.
- (3) Continued use of arsenic.
- (4) Eradication of local foci of infection.
- (5) Transfusion.
- (6) Splenectomy.

(a) Rest in bed should be insisted upon in all cases where active treatment is being enforced, for the reason that all muscular action further depletes the vitality and renders the therapeutic measures less active than where absolute rest can be obtained.

In the febrile cases complete rest should be demanded for several weeks after the fever has subsided, and improvement generally has begun.

(b) High calory diet, where the gastro intestinal condition is not too acute should be carried out in all cases, varying from 3500 to 4500 calories. When intestinal symptoms begin to manifest themselves, the number of calories may be reduced only to be increased again as soon as condition will justify it.

Owing to the tendency to gastric disturbances, amounting in many cases to an achylia gastrica, it may become necessary to give dilute hydrochloric acid, pepsin and bile salts, to aid an impaired digestion. In all cases the diet should be selected with a view to its value and ease in digestion.

(c) Arsenic has always been the mainstay in treating pernicious anemia, and has lost none of its popularity, as the number of cases coming under our care increases.

The choice of the arsenical preparation will vary with the conviction of each physician. The newer one, such as neo-salvarsan, salvarsan and cacodylate of soda, are with many men replacing the old Fowler's solution, but in my opinion it is often advisable to change from one to the other as tolerancy for any one of them begins to develop. Salvarsan or neo-salvarsan should be given in smaller doses and usually about the periods, as indicated in syphilis. Cacodylate

of soda has given me excellent results, seven and one-half grains subcutaneously, once in the twenty-four hours, supplemented by additional doses of Fowler's solution.

(d) Eradication of foci of infection should especially engage your attention, for these more than any one factor will limit the improvement of your patient.

Very often one or more small pus pock-ets around the teeth will do more to retard the favorable progress of your case than anything else.

(e) Blood transfusion is indicated in many of these patients, and no hard and fast rule can be set down, when to transfuse and when not to, though a very good procedure to follow is, when in doubt, transfuse.

Of the two methods, direct and indirect, there is in my opinion but one to choose, and that is the indirect. And of this, the citrate is much preferred to the use of the whole blood. In carrying out the citrate method there are several points to be observed as follows:

(1) Your donor. Be sure that he is free from syphilis and is otherwise sound. Where possible, type both the blood of the donor and the recipient, though in isolated cases this is not always possible.

(2) The sodium citrate solution should be chemically pure, and made up with freshly distilled sterile water. The strength of your sodium citrate is 24 per cent, and should be added to the freshly drawn blood slowly and thoroughly mixed.

(3) Thoroughly mixing of the citrate with the blood as it is withdrawn should be insisted upon, and care taken to see that the corpuscles are not broken up.

(4) The quantity transfused should vary from 500 to 1000 C.C.S., and the transfusion may be repeated once a month or less, as individual patient may require.

The dangers attendant upon transfusion are three:

- (1) Embolism.
- (2) Acute dilatation of the right heart.
- (3) Hemolysis, and a fourth may be added, of shock and chill, though these are not usually dangerous.

Embolism may be avoided by extreme care in mixing the sodium citrate and blood. The danger of dilatation overcome by giv-

ing the blood relatively slow. And hemolysis avoided by accurate typing beforehand.

(f) Splenectomy of recent years has been carried out with some success, so far as lessening the acute exacerbations and prolonging life, but holds no hope for an absolute cure. Twenty per cent of cases so operated on, die immediately post-operative, and in the remainder a fair percent may go for a long period without a return of the condition.

**TREATMENT OF SPECIAL SYMPTOMS.** Local hemorrhages occurring in many of these cases can be controlled by application of adrenalin chloride.

Intestinal bleeding calls for the withdrawal of all food, and the use of intestinal astringents.

Gastro intestinal conditions will arise, and each case must be treated on its merits.

The delirium which is occasionally seen will often demand opiates, and in the extreme cases I have seen a tablet of H. M. C. giving better results than morphia alone.

However, in spite of all your care and treatment your patient's sentence remains the same, and you should for that reason endeavor by every means in your power to make his last years as comfortable as it is possible.

**Discussion:** Dr. John A. Roddy, Oklahoma City.

Recently, in conversation with Prof. W. M. Coplin, I learned of recent findings indicating that a particular donor should not be used more than once to give blood to a patient, for the treatment of pernicious anemia; for the reason that observation has demonstrated that these patients manifest the best results when each transfusion is of blood from a different person.

#### TREATMENT OF EYE INJURIES, WITH USE OF THE CONJUNCTIVAL FLAP, IN PERFORATIONS

O. I. GREEN, M. D.,  
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Injuries of the eye, vary from the slight excoriation caused by the small foreign body, floating in the posterior cul de sac, to extensive lacerations, with subsequent loss

of a large part of the contents of the globus bulbi.

Probably the most common injury which we are called upon to treat, is that caused by the small metallic body, steel, emery, or cast iron, imbedded in the cornea. While these are usually not difficult to handle, nevertheless, there should be brought to their removal, a certain technic, which renders the operation painless to the patient, does the least amount of trauma to the already injured cornea, and reduces the liability of infection to the minimum.

The cornea should be thoroughly anaesthetized, preferably with a two per cent solution of holocain and then the foreign body should be gently lifted out. I like a moderately sharp pointed knife or spud, sterilized in pure phenol, and then in alcohol for this purpose. With a sharp instrument of this type, I can get under the foreign body, and lift it out to much better advantage than I am able to do with a more blunt instrument. Frequently after removing a foreign body, we will notice a ring of rust or other discoloration, lining the depression in the cornea. This should always be removed, as it remains as a foreign body, irritation is prolonged, and healing is delayed.

So long as the foreign body remains upon the surface, or within the substance of the cornea, our work is comparatively simple, but once the substance penetrates the coats of the eye, and enters the eyeball, our work becomes more complicated. First of all the X-ray should be used, and the substance definitely localized. This is exceedingly important; then if possible, the composition of the substance should be ascertained, and if it be of the various forms of iron, the magnet should be applied. Many substances may penetrate the eyeball, such as glass, lead or other non-magnetizable metal, stones, splinters of wood, etc., so that their removal, without enucleation, resolves itself into a question of steel in the vitreous.

Any foreign body remaining in the eyeball for any length of time, is likely to set up, not only a purulent but also a sympathetic ophthalmia, so that the removal of the foreign body, or the enucleation of the injured eye, is exceedingly urgent. Of these substances, copper is the most likely, and glass the least likely to cause a purulent ophthalmia. Each of these cases, however, is a problem in itself. Not infrequently it is best not to attempt to remove the sub-

stance through the wound of entrance, but by means of the magnet, to drag the metal to a more favorable location, through the pupil if possible, and into the anterior chamber, and there remove it through a small, clean-cut incision through the cornea. In those cases, however, in which our efforts are entirely unavailing and the substance still remains within the eyeball, the only rational procedure is enucleation.

There is still remaining, a large group of eye injuries, lacerations of the eyeball, in which no foreign body complicates the wound, but in which there is need for quick and decisive action to prevent further contamination and possible infection, and to prevent further loss of the contents of the globe. In this group of cases, the rational procedure has become known as the "Conjunctival Flap" operation, in which a flap is made of the adjacent conjunctiva and drawn over the wound. Cut off any prolapsed iris, clear away the extruded vitreous and render the field as aseptic as possible. Then with a pair of blunt pointed scissors, separate the conjunctiva from its attachment to the cornea, at the same time undermining it, loosening it from its attachment to the sclera for a considerable distance around the wound, until it can be easily drawn over the wound, where it is held in place by one or more sutures. A small flap will suffice if the wound is small, and there is no gaping of the wound edges; but if the wound is of considerable extent, and the edges show an inclination to spread, more support is needed than can be secured from a small flap. In these causes the conjunctiva should be separated from its attachment at the limbus, throughout the entire circumference of the cornea, undermining the conjunctiva well back of the attachment of the extrinsic muscles, thus making a kind of bag, within which the eyeball rests. The conjunctiva is then drawn entirely over the cornea, and sufficient sutures inserted to hold it in place. For this purpose a moderately fine silk suture is best, as it holds well until the wound in cornea or sclera is united, and after about ten days, cuts through the tissue and loosens as the conjunctiva slips back into its normal position.

There is scarcely an operation performed upon the eyeball that gives one more satisfaction, for by its prompt use, many an eye is saved, that would otherwise be lost. Now it isn't my purpose in this paper to

attempt to designate which eyes should be promptly enucleated and which we might attempt to save by this operation. We all know, that with all possible asepsis, the most careful operators lose eyes from infections from so simple an operation as the removal of a pterygium, while on the other hand, many an eyeball is not only perforated but badly lacerated, without any resulting infection. It is obvious then that many of these cases could be spared enucleation, by the use of this operation.

In closing, I want to report three cases out of about two dozen which I have operated upon in the past two years, wherein I have found a field of usefulness for this operation.

Case Number One. A young woman, in a motor wreck, was thrown against the windshield of an automobile. In addition to receiving numerous cuts about the face, her right eyeball was opened, by a vertical incision, which extended from 12 o'clock to 6 o'clock through the entire extent of the cornea. There was some loss of vitreous, but only a small prolapse of iris, which prolapsed part was excised. The conjunctiva was loosened from its attachment throughout the circumference of the cornea, undermined well back from the limbus, pulled over the globe and united by five silk sutures. Healing was entirely uneventful and the patient suffered but little pain. The stitches were removed on the 10th day, showing the cornea well healed, with a globe of good size, and not badly disfigured by the scar.

Case Number Two. It was that of a young woman, whose eye was cut by glass, but in a very peculiar way. She went to the ice box to get a bottle of soda water when, just as she opened the door the bottle exploded, several pieces of glass striking her in the face and one striking her in the right eye making a triangular opening, three by five millimeters in extent, two millimeters outside the limbus, at 9 o'clock. I saw the girl within a half hour after the accident, and at that time the sclera was retracted, the torn edges of the choroidal coat were presenting, and vitreous was escaping. I immediately placed her upon the operating table and under a local anesthesia cleared away the extruded vitreous, undermining the conjunctiva until the flap could be easily drawn over the wound with slight tension, where it was held in place by three sutures. I strongly suspected that

a piece of glass had lodged in this eye, although the ophthalmoscope and the X-ray both failed to show it. The eye was much inflamed, and painful for six weeks, but finally quieted down under the use of atropine and hot fomentations. Shortly after this the girl returned to her home town, in an adjoining state, and I have seen her only once since. At that time she reported the eye had given her no further trouble and her vision was 20-30 with a plus two lens. On the other eye she was wearing a plus 75.

Case Number Three. It was that of a farmer, who, while driving a 16-penny nail, struck it a glancing blow causing it to strike him in the right eye, penetrating into the interior of the eye just outside the limbus, at 3 o'clock. The patient rendered first aid in this case, by pulling out the nail and tying a much soiled handkerchief over the eye, while he drove (with a horse and buggy) 12 miles into town for help. I immediately dilated the pupil, and made an ophthalmoscopic examination but could see nothing, as the vitreous was clouded with hemorrhage. Vision was light perception only. Tension was -1, on digital examination, and vitreous was escaping from the wound. I delayed doing the flap operation on this eye for several days, thinking that as the wound was so small, and its edges practically in contact, it would close by keeping the eye bandaged and the patient quiet. But the continuous escape of a small amount of vitreous was sufficient to keep the wound open, and on the 5th day I made a small flap, and closed the wound. Healing was entirely uneventful. The eye was kept under the influence of atropine and the stitches were removed on the sixth day. At this time patient could see hand movements. On the 10th day vision was 20-200, and with the ophthalmoscope large hemorrhagic masses could be seen floating in the vitreous. Vision continued to improve until at the end of the 6th week it was 20-30 in the injured eye with no other evidence of the injury present.

These few cases are sufficient to show the range of usefulness of this operation, which is one of the most necessary at times, of any done upon the eye.

## CONGENITAL ANOPHTHALMOS WITH REPORT OF CASE

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I am bringing this deformity or mal-development before the section principally because of the rarity of this class of cases and to report one that came under my care. I will not take up your time with anatomy, embryology or history of the eye ball, as you can read that in the text books on these subjects, but only say this deformity is due to the lack of development of the primary or secondary optical vesicle, or failure of the primary optical vesicle to bud out from the anterior primary encephalic vesicle.

Congenital Anophthalmos, or complete absence of eye balls at birth most authors tell us more often are double than single, however, most authors claim that it is never complete, and that by careful dissection there can be found some partial or rudimentary development.

The majority of authors of works on Ophthalmology dismiss the subject with about a dozen or two lines and rarely touch on the cause or pathology of the anomaly, so all we have along this line is merely opinions of the reporters of the cases reported. The most of the case reports I have been able to find of recent date are from foreign writers and are of cases of partial and not complete Anophthalmos in most instances.

Laplat reports that he has experimented with tadpoles and has been able to produce either Anophthalmos or cyclopia by the use of an aqueous solution of some toxic substance on the frog's egg during certain states of embryonic evolution.

These experiments may or may not in time show how these substances or others could apply in the human in a way that could be assigned as a cause of the anomaly. Case Report:

Baby B. was brought to me by his Mother on June 24, 1921, being one of twin boys born two weeks previous.

The twin brother was an average well developed and well formed baby and other than the ocular condition the patient was well developed and well formed.

Family History: Mother and father living and healthy, four other children in family well and healthy. No history of deformity in either side of ancestors. No history

of any venereal disease in family. No blood tests were made.

**Personal History:** Baby had natural birth, and at time of the examination skin was very much yellower or jaundiced than normal; but otherwise seemed in fair physical condition with the exception of where the eyes should be there was a very deep sunken orbital space with normal eyebrows, and in the depths of orbit very minute eyelids with a small fissure between, and very few fine eye-lashes on edge of lids. No sign of eye-ball or any part of one could be discovered by palpation or seen when the slight fissure was separated by retractors.

I deferred any operative procedure or dissection on account of the jaundiced condition until that should clear up.

August 31, 1921, patient was returned in as perfect condition seemingly as a baby could be outside of the deformity. Under general anaesthesia (ether) I made as complete an exploratory dissection of the right orbit as was necessary, to demonstrate there was no sign of either eye-ball or optic nerve.

The lids were immature with partially developed cartilages extending across fissure or joined together at bottom of fissure covered by fairly normal looking conjunctiva, no ocular muscles could be demonstrated as space between cartilage and bottom of orbit was filled with connective tissue and fat and I found nothing that could be taken as any part or rudiment of eye-ball or ocular nerve. The dissection extended as deep in the orbit as I well could without injuring the periosteum.

The left orbit having same appearance as right was not operated.

#### LIST OF SOME REPORTS:

- K. Bierring, Ugesk, of Lager, Aug. 11, 1921.  
 E. Cechetto, Arch., dioyal; V. 27, 1920, pp. 114-120.  
 D. L. Davis, Brit. J. Ophth., July, 1917.  
 Gioseffii, Reforma Med., Feb. 21, 1920.  
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 J. Rosenbaum, canad., M. A. J., March, 1919.  
 C. R. Stockard, Anat. Records, V. 18, 1920-21, P. 261.  
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 Wright, Ophth. Rec. Dec. 1916.

## URETHRITIS

JAMES H. HAYS, M. D.,  
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In this paper we will discuss inflammation of the male urethra and its simple complications, omitting diseases of the prostate and seminal vesicles.

The urethra is a small canal extending from the bladder, downward and forward to near the level of the symphysis pubis; then upward and forward to the external meatus.

In its course it has somewhat the shape of the letter S. This canal varies in size, being smallest at the external meatus, largest at the bulb and the navicularis. These dilations of the canal are on the posterior or lower side. The anterior wall of the canal is smooth throughout its entire length. These points should be kept in mind by the examining physician. This canal is covered throughout with a mucous membrane. The first or prostatic portion of which is made up of stratified squamous epithelium.

The remainder of the canal the cells are of the columnar type, situated in the submucous tissue there are many glands (the glands of Littre) which empty their secretion through little ducts in this canal.

Most writers have divided the urethra into three parts—prostatic, membranous, and pendulous.

The prostatic portion contains the veru, the outlet of the ejaculatory ducts.

On each side of the membranous urethra are Cowpers glands, which empty their secretions into this portion of the urethra just inside the bulb.

The submucous glands are much more numerous in the pendulous urethra than elsewhere. There are also in the urethra a varying number of pockets or folds, known as the lacunae Morgagni. The importance of these lacunae is that 10 to 20 of the submucous glands empty their secretions here.

There are two forms of urethritis—specific and non-specific.

Specific urethritis is due to the gonococcus. Non-specific is due to one or more of the pus forming organisms—the staphylococci, streptococci, the colon bacillus, and tubercle bacillus.

There may also be a localized urethritis due to the bacillus of Ducrey and the spirochete of syphilis.

More than 90 per cent of the cases of urethritis is due to the gonococcus. The original focus of infection is in the navicularis which is about one-half inch inside the external meatus. The gonococcus invades the mucous membrane at this point, the organism entering between the epithelial cells of the mucosa. The irritation of the organism and its toxin produces an edema of the epithelial cells which break down, forming an erosion or ulceration. If left alone the infection spreads only by direct extension.

The attention of the infected individual is first attracted by a burning on urination, or a slight yellowish watery discharge or a swelling of the lips of the external meatus. He usually consults a friend, then some druggist and eventually a physician. If he is fortunate enough to have his friend suggest some remedy and the druggist furnish the remedy with a dirty syringe; or as is often the case, the druggist will advise a "better remedy" to be applied with this same syringe, the infecting organism will be thrown farther into the urethra. Or perhaps he will consult a busy general practitioner, who will prescribe a remedy to be used with this same syringe and the individual will get the same result that he has with his social friend, or his druggist.

The gonococcus not only invades the mucosa, but also the ducts of the sub-mucous glands. In every case of urethritis, some of the sub-mucous glands are infected. If the ducts remain patulous the case should be treated as one of simple urethritis. If the patient is so fortunate as to have the infection only in and around the navicularis, the treatment is very simple and the recovery may be made a speedy one—simple cleansing irrigations, such as sterile boric acid or potassium permanganate solution.

If the case is seen early it can oftentimes be aborted with a few local applications of a 10 or 20 per cent solution of silver nitrate; otherwise only the cleansing irrigation should be used till the edema has subsided and the discharge lessened. We may then hasten the recovery by instillation of some silver salt such as protargol or albargin.

It is very rare, however, to have such a simple case of gonorrhoea. Nearly all cases

have a more extensive infection before a physician sees them.

Whatever part of the urethra that is infected, the same erosion takes place as in the navicularis, and the same treatment should be carried out as in the simple original infection, though the method of application must of necessity be varied, namely, cleansing mildly astringent irrigations, when the swelling subsides, careful instillation of the silver salts.

If this method of treatment does not bring about a cure in four weeks, then a careful examination of the urethra should be made with the endoscope, and the infected spots treated with a topical application. This plan of treatment should be carried out with care and gentleness. No instrument of any kind should ever be forcibly passed into the urethra. With the endoscope we can not only treat the erosions of the mucosa but we can also observe whether the ducts of Cowpers glands or the sub-mucous glands are patulous. If they are closed and the gland is filled with pus, we can incise it producing good drainage into the urethra.

The erosion or ulcerations of the mucosa are sometimes extensive. They may extend longitudinal or circular, which can only be treated successfully by the local application through the endoscope of a 10 to 20 per cent solution of silver nitrate, repeated about every third day. The erosion may extend so deep as to completely destroy the epithelial cells. These cells will never be entirely restored, as a result, scar tissue is formed. The deep erosion of the mucosa produces the greatest complication of urethritis—the urethral stricture.

There are two forms of urethral stricture. Perhaps it would be better to say that there are two stages of the urethral stricture, the granulating, or soft stricture, which bleeds readily, and is easily dilated, and the hard form which is difficult to dilate—and greatly obstructs the flow of urine. Frequent urination, painful urination, and disturbance of the flow of the urine, are the three diagnostic symptoms of a stricture. The nearer the stricture is to the bladder, the more frequent and painful will be the urination.

The peculiarity of the disturbance of the stream gives a good idea of the kind of stricture. A small stream suggests an annular stricture, a flat or split stream is

indicative of a longitudinal stricture. All longitudinal strictures are on the posterior or lower wall of the urethra.

Sticture is the only complication of urethritis that cannot be cured. Once a stricture, always a stricture.

We have but to remember that a stricture is scar tissue replacing epithelial cells. Scar tissue always contracts. It is true a stricture can be dilated, but as surely as it is dilated it will contract, and the patient should be told and retold, that a stricture must always be treated.

The great error in the treatment of stricture is surgery. No case of stricture should ever be operated except in emergency. No physician is ever justified in cutting a stricture or doing an external urothrotomy except in case of an over distended bladder, because the incision will increase the amount of scar tissue and thereby increase the extent of the stricture. If the stricture is so near complete that a small sound cannot be passed then we should resort to the filiform. It may require an hour or more to pass the filiform, but it is time well spent. Often times when I have failed to pass the filiform in the usual way I have succeeded through the endoscope.

If I know that a patient has so bad a stricture, that he can only pass a small stream, and it requires 10 or 15 minutes to empty his bladder, I give him one-fourth or one-half grain of morphine hypodermically, then wait 30 to 60 minutes before attempting dilatation. I then fill the urethra, anterior to the stricture with a one per cent solution of cocain. After such preparation the filiform can usually be easily passed, and a small grooved sound can then be passed over it. The fact that the filiform is passed into the bladder and a sound can be passed over it, is **never** a justifiable **reason** for using **force**.

After the first sound is passed, the balance is only a question of time and patience on the part of the physician. The urethra should be dilated at this time up to an 18 or 20 French.

After this treatment, the patient should have a hot sitz bath and go to bed.

These treatments should be repeated every three to five days until the stricture area is dilated to the same size as the rest of the urethra. After this, sounds should

be passed every month for a year.

The patient should then be instructed to have sounds passed every three to six months for the balance of his life.

The nearer the stricture is to the bladder the more frequently the urethra should be dilated.

Non specific urethritis is usually less severe than the specific, but we cannot distinguish by the symptoms or the discharge the difference. It is only by a microscopic examination of the smear or perhaps better by a culture that a correct diagnosis can be made.

In some cases it is of very great importance to the patient to know whether the infection is specific or non-specific. It is of value to the physician also because the treatment is different. If it is a colon bacillus infection the irrigation and topical application should be alkaline. If it is a streptococcus or staphylococcus infection, weak solutions of silver nitrate is the treatment par-excellence.

If it is tubercular we know there is an infection higher up, which must be located and removed.

The non-specific infections of the urethra are, as a rule, more persistent than the specific. The sub-mucous glands are more frequently invaded the "morning drop" persists and usually the disease can only be completely cured with the endoscope.

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## DENGUE FEVER IN LOUISIANA

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A very detailed review is made by L. C. Scott, New Orleans (Journal A. M. A., Feb. 10, 1923), of the clinical history of nearly 30,000 cases of a disease reported as being dengue which prevailed in Louisiana from September to December, 1922. Approximately 1.74 per cent. of the population of Louisiana suffered from the disease. Comparing the general course of dengue fever in Louisiana with the standard text-book descriptions of that disease, the following conclusions seem justified: (1) With one exception, the syndrome as observed by physicians in general throughout the state conforms very closely to the clinical entity called dengue fever. More or less deviation from the type in many instances does not in any way modify the conclusion. (2) An exception occurred in the remarkably fre-

quent occurrence of gastro-intestinal symptoms, notably hematemesis, regardless of the source of the blood and of melena. (3) While the fact that a few of the practitioners regarded the cases as an atypical form of yellow fever is worthy of consideration, it does not warrant the acceptance of this view; the verification of such an hypothesis would demand experimental evidence. (4) The insect known as *Aedes aegypti* and commonly called the "tiger," "yellow fever," "house," "little day" or "calico" and *Stegomyia* mosquito was the principal if not the sole vector of the disease, and its widespread distribution constitutes an ever present menace, which would be acutely appreciated should one or more unrecognized cases of yellow fever be introduced into the state. (5) The principal causes of the decline and cessation of the epidemic were the sudden change to colder weather which halted mosquito breeding, and screening, including protection of patients by mosquito netting, or both. It is possible that sanitation and destruction of mosquito breeding places around homes played a role. (6) Finally, the death rate from dengue itself has been nil, though as a complication of other diseases may have materially hastened the outcome.

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#### ACUTE BARBITAL (VERONAL) POISONING

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Acute barbitol poisoning, in the absence of a history, may easily be mistaken for a number of other diseases giving rise to comatose states. This is especially true of epidemic (lethargic) encephalitis and certain cases of meningovascular syphilis. The case reported by William Cole, Anaheim, Calif. (*Journal A. M. A.*, Feb. 10, 1923), illustrates most of the salient features in the symptomatology. A man, aged 39, married, was admitted to the hospital in a state of profound coma. Search of the patient's effects revealed a box containing twenty 51grain (0.3 gm) tablets of barbitol, and a note to his wife expressing his intention of committing suicide. Four weeks prior to admission, he consulted a physician on account of insomnia, and the latter prescribed barbitol, 5 grains, to be taken at bedtime. He took one tablet each night for a week. At the end of the week, he had the prescription refilled, and he took two tablets each night for another week. It was estimated that the patient had taken more than 300 grains (20 gm.) of barbitol

in a period of less than four weeks, 175 grains (11.6 gm.) of which was taken four or five days preceding admission. On admission, the usual conditions giving rise to coma had to be considered; namely, cerebral hemorrhage, alcohol and drug poisoning, epidemic encephalitis, carbon monoxid poisoning, brain tumors, diabetic coma, cerebral syphilis, uremia and unrecognized brain injury. Blood and serologic tests ruled out syphilis and carbon monoxid poisoning. Urinalysis and blood sugar examination excluded diabetes. The previous history of good health and freedom from bad habits practically excluded brain tumor, alcoholism and kidney disease. The history and physical examination eliminated trauma. Carbon monoxid poisoning seemed a plausible explanation for the symptoms at the time of admission, but a more detailed history and the negative blood examination vetoed this opinion. Epidemic encephalitis was simulated very closely; but the definite history of ingestion of large amounts of barbitol, together with the extreme degree of coma, which is not the rule in epidemic encephalitis, led to a definite diagnosis of barbitol poisoning. The patient died. Cole says that this case is the only one reported in recent American medical literature in which there was a fatal outcome.

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#### HYGEIA: ARE YOU FOR IT?

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Next month there will appear on the news stands the first number of the medical magazine for the people—**Hygeia: A Journal of Individual and Community Health**. This journal will be a departure in scope, in character and in make-up from any periodical on health heretofore published. It will not be a "public health" journal—that is, one to appeal to workers in public health; it will be a popular medical magazine. It will not make a special appeal to the intelligentsia or to the scientist, nor will it be a journal to attract the uneducated. It will be a periodical, however, that will make an appeal to the average intelligent layman—the man and woman on the street. And while it is not to be published for the physician, it will, we believe, contain much that will interest him and, occasionally, something that he will find instructive. In any event, whether or not he himself needs it, it will be a periodical that should be on the doctor's reception room table. A special introductory offer to physicians has been appearing in the advertising pages of *The*

Journal for the last six weeks. The responses are encouraging, but this periodical should have the support of the entire medical profession if, in its introduction to the public, it is to be an immediate success. While it might be introduced through the ordinary channels—and these channels will be utilized—it is surely the duty of the medical profession to support this enterprise. In asking physicians' support, we do not ask for a sacrifice: the actual cost of production of this journal to the Association will be far greater than the introductory price at which it is being offered to them. The periodical will be profusely illustrated and will be printed on coated paper throughout. As it will be issued and offered to the public about the end of the first week or ten days in March, this special offer will terminate on March 1. After that date the regular price will prevail.—*Jour. A. M. A.*, Feb. 10, 1923.

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### "LICENSE, NOT LIBERTY."

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"Gov. Sweet Declines to Attend 'Medical Liberty' Discussion.

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"Governor Sweet will not attend a meeting of the American Medical Liberty League, scheduled for Monday night to discuss principles of the league, because he is opposed to its principles, as they have been explained to him.

"The Governor addressed a letter to J. C. Rubright, president of the league, Monday. The Governor said:

"I thank you for your invitation and I wish to say that in so far as you state the principles of the league in your letter, and from reading the press, I do not find myself in agreement with them. I agree that personal liberty is a thing to be cherished, but personal liberty cannot be relied upon to permit any practice detrimental to the health and well being of society. I do not believe that "individual liberty" can be urged as a reason why you should be allowed to do as you please with respect to health matters, regardless of the law and the rights of the community. In my opinion, the rights of society are just as sacred as those of the individual.

"If I am called upon to pass judgment upon any legislation which may be passed

by the legislature now in session, I will be moved in my consideration of this legislation far more by the facts than I will be by any specious arguments affecting the principles of liberty."—*Colorado Medicine*, February 23.

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### INSULIN

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Insulin is one of the names that has been given to the new anti-diabetic hormone extracted from fresh pancreatic tissue. It is a valuable asset in the treatment of diabetes, but it is not curative.

Von Mering and Minkowski (1889) found that a fatal diabetes followed the total extirpation of the pancreas. Lepine (1909) suggested that this type of diabetes might be due to the withdrawal of an internal secretion of the pancreas. Numerous, unsuccessful attempts have been made to isolate this hypothetical hormone. More or less success accompanied the work of Cohnheim (1903), Knowlton and Starling (1912), Scott (1912), Murlin and Kramer (1913), Kleiner (1919) and Paulesco (1921), but the work of these authors was not sufficiently conclusive to justify the use of such extracts in the treatment of diabetes in man. To Banting and Best (1922) belong the credit of isolating that pancreatic extract known as insulin and bringing convincing proof of its value in the treatment of diabetes.

In explanation of previous failures and partial success, it had been assumed that trypsin and other proteolytic enzymes present in the pancreas destroyed the supposed, sugar-burning hormone of the internal secretion. Banting proposed to circumvent the action of these enzymes by taking advantage of the well-known fact that the acinar cells in the pancreas which secrete the digestive enzymes degenerate in from seven to ten weeks after the ligation of the pancreatic duct, whereas those of the islands of Langerhans remain more or less intact. Opportunities were afforded him under Macleod at the University of Toronto for testing this theory and, in collaboration with Best, the work was successfully carried out. Such extracts when injected into depancreatized dogs caused a disappearance of all diabetic symptoms. Collip then prepared extracts from normal, adult, beef pancreas of a sufficient degree of purity to warrant their use in man and convincing results were obtained. It now appears that this

extract may be prepared from any pancreatic tissue if the proper precautions are taken to circumvent the action of the interfering, proteolytic enzymes.

Insulin is injected subcutaneously, two or three times per day. Each cubic centimeter has a definite sugar-burning power which varies with the concentration of the extract, but which apparently has the same effect on all patients, regardless of the severity of the disease.

Alarming, toxic symptoms such as convulsions and death occur in rabbits when excessive doses are given. These symptoms are associated with a blood sugar as low as .04 per cent or less and may be due to the fact that the animals become too free from sugar because such symptoms may be completely and rapidly eliminated by the administration of sufficient glucose. Toxic symptoms, but fortunately of a less degree of severity, have been observed in patients who have received insulin in excess. These symptoms have also been promptly alleviated by the administration of carbohydrate. Fatalities may occur unless some such precautions as the following are taken. The natural tolerance of patients should be ascertained in grams of carbohydrate, protein and fat. The exact value of the food consumed should be known. The exact sugar-burning power of the insulin in grams per cc. should be known. The dosage of insulin may then be adjusted to fit any proposed diet without danger of the patient passing sugar and acetone bodies on the one hand or becoming too free from sugar on the other. As a reward for this type of careful management, patients who would otherwise remain chronic invalids, die in coma or from inanition will be restored to health by ample diets in proportion as insulin is available.

Varying degrees of partial starvation have been used in the past for the purpose of resting the pancreas and thus permitting it to recover from the degeneration produced by overwork. This method has been successful except in those severe cases where the natural tolerance has been insufficient to nourish the patient even when kept continuously at bed-rest. Theoretically the pancreas may be rested by the administration of insulin while the patient is enjoying a fairly liberal diet, regardless of the degree of severity of his disease. It remains to be seen to what extent the natural tolerance may recover with this added help.

To protect this extract from commercial

exploitation but with no thought apparently of financial gain, the discoverers have applied for patents in Canada, the United States, England and other foreign countries.—Calif. State Jour. of Medicine, Feb., 1923.

### THE SAN FRANCISCO MEETING

For the accommodation of members of the American Medical Association, The Atchison, Topeka and Santa Fe Railway Company is arranging to operate special trains from Chicago to Los Angeles on the following schedule:

Lv. Chicago	8:15 P. M.	June 16
Ar. Kansas City	9:00 A. M.	June 17
Lv. Kansas City	11:45 A. M.	June 17
Ar. Newton	4:45 P. M.	June 17
Lv. Newton	5:00 P. M.	June 17
Ar. Colorado Springs	8:00 A. M.	June 18
Lv. Colorado Springs	6:00 P. M.	June 18
Ar. Santa Fe, N. M.	9:15 A. M.	June 19
Lv. Santa Fe, N. M.	11:30 A. M.	June 19
Ar. Albuquerque	2:15 P. M.	June 19
Lv. Albuquerque	5:00 P. M.	June 19
Ar. Grand Canyon	7:00 A. M.	June 20
Lv. Grand Canyon	8:00 P. M.	June 20
Ar. Los Angeles	3:30 P. M.	June 21

This train will consist of Composite car, Dining car, Observation sleeper, and such other standard sleepers as may be desired.

The object in releasing train at Los Angeles is for the purpose of allowing such stop overs as members may desire in Los Angeles, as well as points north of there, and sufficient time for the Yosemite trip. In other words it will allow passengers three and one-half days from time of arrival in Los Angeles until the convention opens in San Francisco.

I am quoting below pullman fares from Kansas City and Newton:

From Kansas City, Mo., to Los Angeles:			
Standard Lower	Upper	D-Room	Compt.
Pullman Rate \$18.25	\$14.60	\$64.00	\$51.50
Surcharge 8.50	6.80	30.00	24.00
Total	\$26.75	\$21.40	\$94.00 \$75.50

From Newton, Kansas to Los Angeles:			
Standard Lower	Upper	D-Room	Compt.
Pullman Rate \$17.00	\$13.60	\$60.00	\$48.00
Surcharge 7.88	6.30	28.00	22.25
Total	\$24.88	\$19.90	\$88.00 \$70.25

Application for space on this train should be made to this office or any Santa Fe agent.

We will appreciate your assistance in routing the Oklahoma members via this route.

### Book Reviews

#### NUTRITION OF MOTHER AND CHILD.

By G. Ulysses Moore, M. D., M. Sc. (Ped.) Instructor in Diseases of Children, University of Oregon Medical School, Medical Director of The Cooperative Infant Welfare Society of Oregon, President North-Pacific Pediatric Society, Pediatricist to the Multnomah County Hospital, and the Florence Crittenden Home, Portland, Oregon. Including Menus and Receipts by Myrtle Josephine Ferguson, B. S., B. S. in H. E., Professor of Nutrition, Iowa State College, Ames, Iowa. Thirty-three illustrations, cloth, 234 pages. Price \$2.00, J. B. Lippincott Company, Philadelphia.

This work deals with the former knowledge of nutrition, newer information, the three known vitamins, Ricketts, Diet during pregnancy and Lactation, Breast Feeding, Development of Breast Milk, Care of Premature Infants, Diet for Infants and Older Children, Artificial Feeding, Faulty Diets and Fallacies regarding diets. It is a concisely prepared resume of the latest acceptations as to the proper care of infantile life. Newer conceptions of breast-feeding, and building up of breast-milk are especially stressed.

#### ESSENTIALS OF SURGERY

By Archibald L. McDonald, M. D., Johns Hopkins University, formerly in charge of Department of Anatomy, University of North Dakota; Lecturer on Surgery, Nurses Training School, St. Luke's Hospital, Duluth; Member Western Surgical Association, etc., 49 illustrations, second edition, revised, Price \$2.50; Philadelphia, J. P. Lippincott Company.

This book covers the general principles of surgical diseases and the resulting pathological changes. Under separate headings the more important surgical lesions of the body are considered. General considerations are made as to many other allied subjects and conditions.

#### PHYSICS AND CHEMISTRY FOR NURSES.

A. R. Bliss, A. M., M. D., Lecturer on Chemistry and Materia Medica, Grady Hospital Training School for Nurses, Atlanta; Professor of Pharmacology, Emory University; formerly Professor, Chemistry and Pharmacology, Graduate School of Medicine, University of Alabama, and, A. A. Olive, A. B., Ph., M. D., Lecturer on Chemistry, Hillman Hospital Training School for Nurses, Birmingham; Professor, Physics and Chemistry, Howard College, etc., 70 illustrations, cloth 190 pages. Price \$2.50. J. B. Lippincott Company, Philadelphia.

#### PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS.

By Edward H. Ochsner, B. S., M. D., F. A. C. S., President, Illinois State Charities Commission; Attending Surgeon, Augustana Hospital, Chicago. Second Edition, Illustrated 56 pages, cloth, Price 75 cents. C. V. Mosby Company, St. Louis.

#### THE SURGICAL CLINICS OF NORTH AMERICA.

St. Louis Number, December 1922.

The Surgical Clinics of North America (Issued serially, one number every other month). Volume II Number VI (St. Louis Number December 1922) 248 pages with 105 illustrations and complete Index to Volume II. Per clinic year (February 1922 to December 1922). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

#### CLINICAL LABORATORY METHODS.

By Russell Landram Haden, A. M., M. D., Associate Professor of Medicine, University of Kansas, School of Medicine, Kansas City, Kansas. Formerly Director of Laboratories Henry Ford Hospital, Detroit. With 69 illustrations and five color plates, Cloth 294 pages, Price \$3.75. C. V. Mosby Company, St. Louis.

## CROSSEN'S DISEASES OF WOMEN

By Harry Sturgeon Crossen, M. D., F. A. C. S., Clinical Professor of Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital, and the Washington University Dispensary; Gynecologist to St. Luke's Hospital; Consulting Gynecologist to the Jewish Hospital, St. Johns Hospital and the St. Louis Maternity Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Fifth Edition, Revised and Enlarged, with 934 engravings and one color plate. Cloth, 1005 pages, Price \$10.00, C. V. Mosby Company, St. Louis.

From the first edition of Crossen's work his efforts have been met with enthusiastic reception, for his finished product stands at the head of American Gynecological endeavor. This fifth edition has been entirely reset and revised and comes to the busy physician as a work of great and unusual value, especially so to the man who must largely rely upon his own initiative in his daily work. Much of the illustrative work is from the original, the photomicrographic work coming from the Gynecologic Laboratory of Washington University Medical School. It will meet with a most hearty reception from the profession.

## PROPAGANDA FOR REFORM

Ginseng. Ginseng has found no place in modern therapy. However, it has been reported that infusions of the extract of ginseng root are diuretic. But the most recent study has shown that the drug does not affect the nitrogen metabolism. Even the quack would find it difficult to discover a tenable potency on the basis of which the use of ginseng could be "boosted." (Jour. A. M. A., Feb. 3, 1923, p. 328).

Mercupresson. From the advertising issued by the Barsa Chemical Co., Inc., 28 W. 23rd St., New York for Mercupresson, this product is essentially the same as that which the Spiroicide Corporation, 28 W 23rd St., New York marketed as "Spiroicide." Spiroicide was claimed to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgalls and dried pomegranates. The product was sold in the form of

tablets. For use the tablets were ignited and the fumes inhaled by the patient. The Council on Pharmacy and Chemistry held that the claims for Spiroicide were unproved and unwarranted and that the routine use of an inexact method for the administration of mercury is detrimental to sound therapy. The Council's rejection of Spiroicide was subsequently fully sustained by the investigation of the inhalation treatment of syphilis carried out by Cole, Gericke and Sollmann. (Jour. A. M. A., Feb. 3, 1923, p. 344).

More Misbranded Nostrums. The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Healing Springs Water (Virginia Hot Spring Co.), a moderately mineralized water, containing bicarbonates of calcium and magnesium, and magnesium sulphate (Epsom salt); Brick's Sarsaparilla (Palestine Drug Co.), containing small amounts of sodium salicylate, potassium iodid, plant drug extractives, including sarsaparilla and a laxative drug, sugar, alcohol and water; Yerk's Extract of Cod Liver Oil (Yerk's Chemical Co.), consisting essentially of compounds of sodium, potassium, calcium, iron, quinin, strychnin and phosphorus, extracts of plant drugs, possible traces of cod-liver oil, malt extract, sugar, alcohol and benzaldehyde as a flavoring; Anemia Tablets (Carlos M. Rivoll), containing 95 per cent of milk sugar and small quantities of cinchona alkaloids, charcoal, sulphur, gum and compounds of arsenic, phosphorus, iron and sodium. (Jour. A. M. A., Feb. 3, 1923, p. 343).

Bayer 205. This is said to be a specific trypanosomid. It is said to have no effect on organisms other than the trypanosomes, even those that are nearly related such as the spirocetes. Most of the work carried out in this country has been carried out with small laboratory animals, but the successful treatment of two human cases of trypanosomia is reported. The composition of Bayer 205 is secret, though a hint as to its chemical composition has been discovered which suggests that it is a dye of the naphthalene series. It is hoped that in the near future the exact composition of Bayer 205 will be declared so that scientists will feel justified to carry out controlled experiments with the drug. For the present the preparation is in the experimental stage.

(Jour. A. M. A., Feb. 10, 1923, p. 406).

A Patented Consumption Cure. The U. S. Patent Office has issued patents for many preparations to be used in medicine for which there has not been the slightest scientific justification. The most recent and most flagrant lack of intelligent patent law administration is to be found in a patent issued to Sergluson and exploited by the Savrite Medical Manufacturing Co., Los Angeles, Calif., for an alleged cure for tuberculosis.

This is the patented cure: Pure olive oil one gallon, squill root three pounds, bitter almonds one and one-fourth pounds, nettle (the plant except the root) one and one-half pounds, red poppy flower petals one pound. These various ingredients are to be mixed, put in a closed container, gradually warmed and left standing for about 72 hours, when the mixture is squeezed, mixed and filtered. The filtrate comprises the "cure". (Jour. A. M. A., Feb. 10, 1923, p. 420).

The Patent Office a Federal Rip Van Winkle. No branch of our government is of greater importance to the progress of the country than the Patent Office provided it is intelligently administered. When the Patent Office is used, however, for an extension of the nostrum business founded on the abuse of patent and trademark laws, it becomes a menace to public health. In 1918 a report of the Committee on Patent Law Revision of the Council on Pharmacy and Chemistry recapitulated the effort made for years by the American Medical Association to bring about patent law reform and detailed some of the cruder forms of Patent Office insufficiency in the granting of patents for medicaments. The issuance recently for a patent on a preposterous mixture of squill root, nettle and red poppy flowers in olive oil as a remedy for tuberculosis is a further illustration of patent office incompetency.

Both common sense and consideration of the health of the public suggests that the patent office should consult the scientific departments of the United States government conversant with medicine and therapeutics in the issuance of patents on medicinal preparations. (Jour. A. M. A., Feb. 10, 1923, p. 405).

Strychnin and Disturbances of the Vision. The use of strychnin in the treatment of certain visual disturbances appears to be extensive. Its use in ophthalmology was

introduced in 1830. In text books the claims for the usefulness of the drug in these conditions run from mere assertions regarding the usefulness of the drug in certain eye conditions to statements that it actually increases the acuity and field of vision within an hour after injection of therapeutic doses. Occasionally there is a statement to the effect that the good results from strychnin are due to psychic influences. And now, ninety-two years after its proposed use, experiments have been made to indicate that the latter opinion is probably correct and that strychnin is without action on vision. (Jour. A. M. A., Feb. 10, 1923, p. 406)

Brown's New Consumption Remedy. The Postoffice Department has issued a fraud order against B. H. Brown, M. D., of Jacksonville and St. Augustine, Fla., and Brown's Magnolia Remedy Co. For some time Dr. Brown, a negro, has been advertising Dr. Brown's New Consumption Remedy especially to members of his own race who are afflicted with tuberculosis. In 1917 the federal authorities prosecuted Brown under the Food and Drugs Act, holding that the claims for the preparations were false and fraudulent. Though convicted, he continued making his claims in newspaper advertisements, and in circulars that answered these advertisements. While the Department of Agriculture is helpless to prevent this form of fraud under the provisions of the Food and Drugs Act, the Post Office authorities are able to reach this form of fraud. The Department filed charges against Brown and after hearing the defense issued a fraud order against Magnolia Remedy Co., and E. H. Brown. (Jour. A. M. A., Feb. 17, 1923, p. 495).

Allen's Goiter Treatment. At Sheffield, Iowa, the Allen Remedy Company conducts a mail order business in "Dr. C. J. Allen's Goiter Treatment". The A. M. A. Chemical Laboratory analyzed the Allen nostrum and found it to consist essentially of ferrous iodide and hydrogen iodide (hydriodic acid) in a colored and flavored syrup. The serious side of the Allen Goiter Remedy Company business is the indiscriminate sale of the nostrum to those who may be, and are likely to be suffering from exophthalmic goiter. It is well known that the use of iodine is likely to aggravate this disease and hence it is not surprising that physicians are beginning to report serious results from the use of the Allen preparation. (Jour. A. M. A., Feb. 24, 1923, p. 572).

## REPUTATION

The following splendid interpretation of the responsibilities of reputation, written by Mr. McCauley, the President of a well known automobile firm, may well be applied definitely to the medical profession. This is presented to the physicians of America by the Dermatological Research Laboratories, as the sentiment which inspired its founders to manufacture the best possible products, and which stimulates its present directors to the constant improvement of D. R. L. Arsphenamine and Neoarsphenamine.

"The man who builds and the man who buys are both beneficiaries of a good reputation. To the one it is a continuous spur and an incentive—to the other the strongest of all guarantees that what he buys is worthy. We sometimes speak of winning a reputation as though that were the final goal. The truth is contrary to this. Reputation is a reward, to be sure, but it is really the beginning, not the end of endeavor. It should not be the signal for a let-down, but rather, a reminder that the standards which won recognition can never again be lowered. From him who gives much—much is forever after expected. Reputation is never completely earned—it is always being earned. It is reward—but in a much more profound sense it is a continuing responsibility. That which is mediocre may deteriorate and no great harm be done. That which has been accorded a good reputation is forever forbidden to drop below its own best. It must ceaselessly strive for higher standards. If your name means much to your public—you are doubly bound to keep faith. You have formed a habit of high aspiration which you cannot abandon—and out of that habit created a reputation which you dare not disown without drawing down disaster. There is an iron tyranny which compels men who do good work to go on doing good work. The name of that beneficent tyranny is reputation. There is an inflexible law which binds men who build well, to go on

building well. The name of that benevolent law is reputation. There is an insurance which infallibly protects those whose reason for buying is that they believe in a thing and in its maker. The name of that kindly insurance is reputation. Choose without fear that which the generality of men join you in approving. There is no higher incentive in human endeavor than the reward of reputation—and no greater responsibility than the responsibility which reputation compels all of us to assume. Out of that reward and out of that responsibility come the very best of which the heart and mind and soul of man are capable."

A revised copy of "Treatment of Syphilis" will be sent without cost to any physician addressing the Dermatological Research Laboratories, Philadelphia or the Abbott Laboratories, Chicago.

## SYPHILIS AND THE CHOICE OF ARSENICALS

Can any doctor, while treating syphilis by intravenous injections of neoarsphenamine, afford to use a quality of drug in the slightest degree short of the best product of the laboratories?

Syphilis, even in its mildest forms, is a fearful infection; its inroads upon the tissues, the possible extent of the damage it is likely to inflict, can never be foretold for any individual. Along with that we are confronted by the fact that the arsenicals are not drugs to be toyed with; unless they are of the highest degree of purity their use is apt to lead to disastrous results. A bad reaction, not to say fatality, is an experience no doctor wants, either on his own or his patient's account.

If wise, one will therefore consider where his drug come from. The cost is a secondary matter. The brand is everything. Neoarsphenamine, D. R. L., identifies the best drug at the physician's disposal today. It has ready solubility, a high chemo-therapeutic index and yet a very wide margin of safety for the patient.

A working monograph on the treatment of syphilis, revised in accordance with the latest ideas on the subject, may be had from The Abbott Laboratories, Chicago, upon request.

# THE JOURNAL

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### EDITORIAL

#### THE LAY PRESS A MENACE IN MATTERS MEDICAL.

Admitting at the outset that many good things appear in the lay press in the form of advice to the public, warnings of the bad and dangerous, does not overshadow the fact that untold damage has been and is being done by publications by alleged "authorities" dealing with matters, which even trained physicians find difficult of interpretation. Of all the publications in the country, perhaps the most flagrant violator of good sense in this respect is Hearst's Magazine. Almost, yes without exception, articles dealing with public health, medical

and infectious disease problems for many years past have been the product of men unknown to the medical profession, not occupying that place of respect as to ability the producer of sermons to the public on these intricate matters should occupy. The latest mess dished up for the consumption of the avid reader of trash is from the pen of one "Dr." Paul De Kruiff. A fair sample of its disregard of the facts may be appreciated from his statement that Sherman's Vaccines are "fake vaccines", that mostly the uninformed, careless and misguided physicians use vaccines. The damage such statements may do when made to those unable to discriminate in such technical matters is obvious. However, there seems to be little or no use to complain as to the attitude of Hearst's in these dangerous practices. This is the same publication that widely lauded a fake cancer cure and many other sensational matters of similar questionable reputes years ago. To this good day not a line attempting to undo the damage those publications did has ever appeared so far as the writer is aware.

The phase we are unable to get around in considering the matter, is what possible good can a discussion of intricate laboratory and technical matters do the average reader, the reader of the type finding it more than difficult to handle the intricacies of his own daily problems or calling. The place to educate the doctor if he is in error, is certainly not to be found in the columns of a monthly, sensational sheet of the type of which we complain.

#### "STUNG AGAIN."

"STUNG AGAIN" is the only possible description of our feelings on receipt of a circular letter mailed Oklahoma physicians by the Uhls Clinic, Overland Park, Kansas, a suburb of Kansas City. Harking back we recall that this institution ran the gamut of the inquisitive, ferrets of the advertising department of the A. M. A., after which it was widely advertised as an ethical institution in many states of the Mississippi Valley. Following the ingenious scheme of the purveyors of Aspirin, just as soon as they had gone as far as they could, no doubt think that the establishment is on a going basis, we find them circularizing the profession, offering this: "Twenty-five dollars (\$25.00) CASH will be paid you on the SAME DAY each case is received at the institution for treatment. No delay. No

red tape." They call it a "consultation fee". We call it "selling the patient". The regretful thing about it is that the proposition suggests that we must have in our midst some who are so mercenary as to accept the proposition, merely for the cash involved.

### SOLDIER AND PHYSICIAN

"Offhand you can rattle off the names of at least 20 military leaders who won lasting fame by destroying life and property.

"But what do you know about Edward Jenner? England, his native country, has been honoring the one hundredth anniversary of his death. Jenner was the physician who discovered how to prevent smallpox by vaccination. This discovery, according to many scientists, has saved probably a thousand lives to every life destroyed by wars. Remember his name. Without his discovery you might be dead now."—Miami "NEWS."

Of course the News is eminently correct. Statements of that character, from laymen, not physicians, do more good to carry conviction to the incredulous and ignorant than statements from any other known source. For instance, the moment physicians call attention to the efficacy of vaccination and, even the most patent measures for prevention of disease, our wild-eyed cults at once howl that we have a selfish motive governing our activities. One of their so-called leaders, a member of the legislature, once opposed, and successfully, the installation of baths in schools of the State, having two hundred pupils or more, on the naïve ground that "baths would frighten the children." Do not forget that medicine, vaccines, no possible form of manœuvre incident to the physician's work was contemplated in the proposal. Mere cleanliness of dirty children was the end sought. Thousands of them who knew not what the word bath meant in their homes, utter strangers to soap and cleanliness, were to be the beneficiaries, to be taught a habit which would attach to them for life. They were prevented such incalculable aid by the objections of a Christian Scientist.

### STATUS OF THE OSTEOPATH TO GENERAL MEDICINE

As suspected for many years past, the Osteopath is shedding his coat of manipulative bone wiggling and attempting to

"wiggle" himself into the ranks of General Medicine. This is evidenced by several incidents of an evolutionary nature, no doubt forgotten or overlooked by some of our members, therefore, worthy of note here.

Almost forgotten is their furious controversy during one of their annual meetings, as to the efficacy of antitoxin in diphtheria. Antitoxin carried the day with the more intelligent and informed, notwithstanding it struck at the very foundation and basic principles of their science, or claims of scientific basis. Slowly, after that they came to recognize the possibility of good in certain vaccines, biologicals and similar claptrap, supposed to be anathema by reason of emanation from the "regular" profession. Now, however, since the Oklahoma Legislature saw fit to place them in the ranks of drug givers provided, their schools give them a smattering in the science of drug giving, they are emerging en masse almost from their cocoon and by various efforts attempting to attach themselves to the ranks of General Medicine. A representative of one county society inquired to know if it would be proper to accept one such as a member, stating that he "was a very fine fellow, ethical, etc.," another wished to know what the attitude of the county society would be in the event of his applying for membership. In Tulsa, they are seeking status as examiners for applicants to the Y. W. C. A., and directors of that institution carried the matter to the Tulsa County Society. Upon motion of Dr. T. W. Stallings, who after discussion introduced and had passed a resolution to that effect, the Tulsa Society will continue to give its efforts as a whole and individually to the work, which is gratis, of course, of protecting the innocent against possible infection, but they cannot yet see just where the Osteopath can possibly come in on the work. If he disagrees with the idea that certain germs produce infection or disease, neither can we, if he agrees with that idea, then we cannot see how he can honestly be an osteopath. Finally, it is inconsistent with the years of propaganda by which the Osteopath has catapulted into his present anomolous position to now turn squarely around and say "white is black" or vice versa.

### Editorial Notes—Personal and General

Dr. C. B. Barker, Guthrie, spent the month of January at Tulane University, New Orleans, doing suspension bronchoscopy work.

Dr. J. M. Nieweg, Duncan, spent several weeks in Chicago recently doing special work in gynecology and proctology.

Dr. J. S. Allison, Tahlequah, visited the New Orleans Clinics in February and March.

D. J. M. Postelle, Oklahoma City, attended the New Orleans Clinics in March doing work in gastro-enterology.

Dr. W. B. Smith, Fairland, has been appointed health officer of Ottawa County, succeeding Dr. J. T. Wharton, resigned.

Dr. J. J. Hardy, Poteau, has been appointed county superintendent of health for Leflore County.

Carter County Medical Society held its annual meeting and banquet at Ardmore, February 13th. Sixty physicians attended the meeting participating in the program noted below. Dr. S. DePorte, Secretary reports it as the "best meeting we ever had."

1. Opening Address..... Dr. T. J. Jackson, Pres.
2. Music, Sextette—The Awakening.....Daniels  
a. Mmes. N. C. Wood, A. M. Hepler, Billy Baker, Adam Alexander, Tom Frame, E. H. Royer.  
b. Solo "Elegie".....Massenet.  
"The Star".....Rogers  
Mrs. L. B. Meyers
3. Address of Welcome.....Dr. J. R. Pollock  
a. Reading of the Minutes Dr. Deporte, Sec.s
4. Tuberculosis.....Dr. L. J. Moorman, Okla. City  
Early diagnoses and discussion of management.
5. What to do with the uterus at the time of Double Salpingectomy or Double Orophorectomy.....Dr. J. S. Hartford, Okla. City
6. Diabetes, The nature and treatment with demonstration of food values.....Dr. C. J. Fishman, Okla. City
7. Malignancy, Early diagnoses and treatment, .....Dr. A. C. Scott, Temple, Texas
8. Closing Remarks.....Dr. S. W. Wilson

### THE TULSA ANNUAL MEETING.

General Chairman, Dr. Fred Y. Cronk, has made the following selections for committee heads to have charge of various phases of the Annual Meeting, May 15-16-17. Hotels (and you had better make your reservations early), Dr. A. W. Roth; Entertainment, Dr. A. V. Emerson; Reception, Dr. T. W. Stallings; Meeting Places, Dr. Roy W. Dunlap; Finance, Drs. Horace T. Price, G. A. Wall and W. A. Cook; Clinics, Drs. G. H. Butler, for Tuesday and Thursday and Fred S. Clinton for Wednesday. This bids fair to be one of the best meetings ever held. The members of the Tul-

sa County Medical Society are already unlimbering for the finals. Every thing thought to be of entertainment and use to the visitors is being arranged. The meeting places, will all be within a hundred feet of each other, in fact, in three buildings, two side by side, the others directly across the street.

Again the necessity that prospective attendants on this occasion, secure reservations at the hotels at the earliest date, is urged. If this is not done there will be some weary and disappointed doctors, we are sure.

Tulsa physicians are anticipating the construction of a building to be used exclusively by physicians, dentists and allied professions. The work is made possible by the foresight of Dr. Charles W. ay, a wealthy Tulsa dentist. Contract has been let for an eight story building, to be located at 6th and Boulder, which will cost \$400,000. Certainly Tulsa needs and has needed for years such a building, and this one will relieve the situation greatly. The ordinary office building is nearly never fitted for the use of professional men. Sinks, water, and gas piping are often not to be had at all in the convenient form they should have, the result is that makeshifts must be tolerated. Dallas has just completed one of the largest buildings in the southwest, eighteen stories of modern steel, glass, and concrete construction, yet many long, weary years have elapsed since that was first planned. All of which means Tulsa was never accused of being slow.

Dr. Winnie M. Sanger, Oklahoma City, a leader in the Oklahoma State Federation of Women's Clubs, addressed the young Women of Weatherford recently. Her subject was "Beauty and Duty."

The State Health Department concluded to give the town of Picher an object lesson in sanitation of the type not to be easily forgotten. To that end sanitary inspectors recently had warrants issued for ten offenders. That is a most effective way to have a sanitary community, one worthy of emulation in several neighborhoods within the writers ken.

### *Abstracts, Observations from Current Medical Literature*

#### ACTION OF STRONGER SOLUTIONS OF MERCUROCHROME IN EARLY GONORRHEAL INFECTIONS

Ernest Rupel, Indianapolis (Journal A. M. A., Feb. 24, 1923), has used a 5 per cent. mercurochrome-220 soluble solution with good results. A disappearance of purulent discharge was effected by the third day in 75 per cent. of these cases. In ten, or 21.7 per cent., of the cases, posterior symptoms developed, the severity of which did not differ from the usual incidences of such. Approximately 70 per cent. of the patients reached an apparent cure in one week, and in ten days 75 per cent. were cured. Freedom from symptoms, both objective and subjective, constituted a "cure." Fully one half of the patients have been dismissed more than a year. There have been no recurrences.

#### SIMPLE GOITER AS A RESULT OF IODIN DEFICIENCY

The results obtained so far by J. F. McClendon and Agnes Williams, Minneapolis (Journal A. M. A., March 3, 1923), have all fallen into line with the idea that there is an inverse ratio between the amount of iodine in surface waters or those of shallow wells or springs, and the distribution of goiter. The problem is discussed in detail. It is not intended to intimate that there is enough iodine in drinking water to prevent goiter. It seems more probable that the iodine in water is merely an indication of the iodine in soils which come in contact with this water, and that the iodine in soils is concentrated by the plants growing in the soils, and in that way the population over a given area receives iodine through the food.

#### POSTINFLUENZAL CHRONIC PNEUMONITIS

It is commonly stated that influenza predisposes to pulmonary tuberculosis. This may be true, says Francis H. McCrudden, Boston (Journal A. M. A., March 3, 1923); but he also asks whether it is not possible that this belief is due to the confusion of

tuberculosis with the postinfluenzal non-tuberculous, pulmonary conditions described in this paper. We all see cases of pulmonary disease in which the tubercle bacillus cannot be found in the sputum, and cases in which physical changes characteristic of pulmonary tuberculosis cannot be found in the lungs, which are, nevertheless, diagnosed as possible, or even probable, pulmonary tuberculosis. But in the case of a patient giving a history of severe influenza and pneumonia, preceded by good health and followed by chronic pulmonary disease, a diagnosis of pulmonary tuberculosis should not be made unless either physical or roentgen-ray findings show the definite characteristics of pulmonary tuberculosis, or the sputum shows tubercle bacilli. It is possible that pulmonary tuberculosis may attack a person suffering from this postinfluenzal pneumonic condition, so that the two conditions may be presented in the same patient, or that pulmonary tuberculosis may immediately follow a severe case of influenza. McCrudden reports four cases to illustrate the points made.

#### THE RESOURCEFUL GENERAL PRACTITIONER OF MODERN MEDICINE

Frank Billings, Chicago (Journal A. M. A., Feb. 24, 1923), says that the time has come for plain statements in regard to modern medical practice, with the purpose of bringing the public and the members of the medical profession as a whole back to good common sense views. It is his purpose to attempt to show how the general practitioner may continue to occupy the important place in the field of practice which was his until recently. He says that in their work, not all general practitioners are resourceful and sure of themselves. This fault is due, in some instances, to inadequate early training, but in a majority of men it is due to laziness and failure to take advantage of the opportunities afforded all physicians. The physician who makes all possible use of his daily clinical opportunities learns something new and useful every day of his professional life. Naturally, this daily clinical study develops the powers of observation and manual dexterity in physical examination and in treatment. The knowledge which this ever increasing experience affords is refined and

stabilized by purposeful reading of standard textbooks and periodicals, by association with fellow practitioners and by the discussion of papers read before medical societies, and by writing papers on subjects which the physician's daily clinical observations justify. Membership and active participation in the work of the county medical society is of great educational benefit to the physician. It affords personal contact with fellow practitioners in the courteous discussion of medical subjects and professional problems, promotes mutual respect and good will, and is a potent factor, conducive to increased self-respect and self-reliance on the one hand, and to a decrease in the size of the hat, if imaginary megalomania makes one a nuisance to his fellows. Concisely written reports of interesting clinical observations presented before medical societies and for publication are a splendid means of self-education, and are justified because they furnish a valuable addition to medical literature. Diagnosis is the most important factor in the practice of medicine. With due regard for the value and need of all the splendid ultrascientific laboratory and instrumental methods of physical and functional diagnosis in investigatory medical work, they are needed in the routine clinical care of not to exceed 20 per cent. of all the patients of any urban or rural community. Unfortunately, many lay people have been made to believe and apparently a large number of physicians think that the routine application of the ultrascientific methods of diagnosis is necessary in the majority of cases. The fact is that the diagnosis can be made in fully 80 per cent. of all cases by a resourceful general practitioner who will efficiently use his brain, special senses, hands and an always available simple and inexpensive laboratory and instrumental equipment. The history of the past and present condition of the patient is one of the most important, if not the most essential, factor. A majority of practitioners do not make written records of their patients: these are absolutely essentials to accuracy in diagnosis and efficiency in practice. The conscientious practitioner will make a careful, general physical examination of practically all patients who seek his services. An occasional patient with a slight ailment, and especially those with slight injuries or lesions requir-

ing surgical treatment, are exceptions. Daily practice in technic and judgment is the program which every physician must follow to become a skilled diagnostician. The practitioner can gain much by observing others at work in organized clinics or by taking postgraduate courses in diagnosis, when these are available; but the efficiency of the practitioner in diagnosis is mainly dependent on his own industry and determination to make the most of his own clinical opportunities. There is a growing custom in urban practice for general practitioners to have the routine laboratory examinations, such as urinalysis, blood estimations and other simple tests, made and the results interpreted for them at the numerous available commercial laboratories. In Billings' opinion this is a great fault in practice; it would be quite as rational for the practitioner to depend on available organized clinics for the physical examinations and diagnosis of patients. For the few patients who require laboratory or instrumental tests which involve special knowledge and technical skill in their application, such as blood chemistry, serology, bacterial cultures, elaborate blood counts, electrocardiography and efficient roentgenology, the practitioner should make use of the excellent commercial laboratories, public clinics and available state, county and municipal health laboratories. Billings believes that the preservation of the general practitioner, as the most important factor in the field of practice, is dependent chiefly on himself. He must keep abreast of the advance of modern medical knowledge and practice, chiefly by his own efforts. If he strives to improve and help himself he will be successful; will justify his importance in the medical field, and will attract the ill and injured to his door because of his professional individual superiority as compared with men in narrower fields of practice, alone or in public or private groups. The necessity for the preservation of the general practitioner in the city and in rural districts, for the general public good, justifies and demands that the organized medical profession should assume leadership in educating the public to understand and comprehend the need of hospital centers, including diagnostic facilities in every community financially capable of self-support.

## CUTANEOUS ALLERGY IN SYPHILIS

The cutaneous allergy in syphilis, with special reference to the luetin reaction and the necessity for controls in intracutaneous tests, was studied by John A. Kolmer and S. S. Greenbaum, Philadelphia (Journal A. M. A., Dec. 16, 1922). The intracutaneous injection of syphilitic subjects with 0.1 c.c. of serial dilutions of luetin and a control fluid of ascites agar yielded reactions of the same kind and degree. The intracutaneous injection of a pure luetin or vaccine of washed *Spirochaeta pallida* suspended in saline solution did not yield specific allergic reactions. The reactions occurring among syphilitic subjects were sometimes slightly larger and better defined than those occurring in healthy subjects, but the differences were slight and of no diagnostic significance. The reactions occurring among syphilitic patients following the intracutaneous injection of old luetin, the control fluid and new luetin or vaccine of *Spirochaeta pallida*, were ascribed to nonspecific and physical processes of antiferment absorption. In syphilis, nonspecific cutaneous sensitiveness is enhanced by some unknown mechanism, so that the intracutaneous injection of different substances is capable of engendering nonspecific reactions of greater extent than occurs in nonsyphilitic individuals. The results of the present investigation indicate either (a) that true cutaneous allergy does not occur in syphilis, or (b) that the cultures of *Spirochaeta pallida* employed have lost completely, or nearly so, in allergenic or anaphylactogenic properties. In conducting intracutaneous tests, the authors insist that a control fluid should always be included, capable of engendering the same nonspecific reactions, or the amount injected must be small enough on the basis of actual tests not to elicit nonspecific reactions. These precautions are particularly necessary for intracutaneous tests among syphilitic patients, or in subjects with other diseases accompanied by enhanced nonallergic cutaneous sensitiveness.

## OTITIC ABSCESS OF THE CEREBELLUM

The case reported by C. F. Yerger, Chicago (Journal A. M. A., Jan. 27, 1923), is of especial interest, (1) because of the difficulties it shows in diagnosis (some cases will give few, if any, localizing signs); (2)

because a cerebellar abscess was found on surgical exploration of the posterior cranial fossa, and (3) because the necropsy report was added to the clinical record, thereby making the case record complete.

## TRANSPLANTATION OF TENSOR FASCIAE FEMORIS IN CASES OF WEAKENED GLUTEUS MEDIUS.

The limp caused by a weak gluteus medius, with marked swaying of the body toward the involved side, and dropping of the hip on the opposite side (Trendelenburg sign), is very noticeable in many cases of poliomyelitis. In the endeavor to alleviate this limp, Arthur T. Legg, Boston (Journal A. M. A., Jan. 27, 1923), devised the plan of transplanting the tensor fasciae femoris muscle into the outer side of the femur to increase the abductor power, diminished by the loss of power in the gluteus medius. So gratifying have been the results of this operation that he has performed fifteen such operations with very satisfactory results in most cases. The Trendelenburg sign has disappeared, and the lateral swaying of the body has markedly diminished, if not disappeared.

## THE MENACE OF THE DIAGNOSTIC THROAT CULTURE IN DIPHTHERIA

In the interests of clear medical thinking and of our patients, Jesse G. M. Bullowa, Reginald C. Hardman and Harry R. Litchfield, New York (Journal A. M. A., Jan. 27, 1923), emphasizes the fallacies that may result from the throat culture diagnosis of diphtheria, and the consequent delay in making the diagnosis from a laboratory report instead of from the clinical picture. The dangers of depending on the diagnostic culture are presented both statistically and by the report of individual cases.

## THE BLOOD PRESSURE OF HEALTHY MEN AND WOMEN

This study, reported by Brandreth Symonds, New York (Journal A. M. A., Jan. 27, 1923), is based on the record of risks accepted at standard rates by the Mutual Life Insurance Company of New York for the years 1907 to 1919, inclusive. In connection with the use of a numerical rating, as is the practice of the New York Life

Insurance Company, which charges an excess premium for a systolic pressure of 140 mm. in the ages below 40, a question arises whether any systolic pressure above 140 mm. should not be suspected of pathologic possibilities. The mortality ratios do not definitely prove this, but, for pressures above 145 mm., they indicate it strongly. Pressures below 100 mm. are rare in life insurance. They will usually be found in the very young and thin, and life insurance has shown that the applicant presenting the combination of youth, thinness and a pressure below 100 is prone to tuberculosis. To some extent this holds true also for those having a pressure below 110. Among those who are not young, these low pressures do not seem to be associated with increased mortality. In fact, the mortality ratios indicate that low pressure after the age of 45 is desirable. This is of great interest, for the average systolic pressure begins to increase decidedly at that age. It would seem that the average pressure runs counter to the best interests of health. In that respect, it resembles weight; for the average weight increases with age, while the lowest mortality after the age of 45 is found among those who are 15 per cent. lighter than the average weight. The systolic pressure of healthy women are a little lower than man's up to the age of 40, partly for the reason that women weight less up to this age. After that, they are a little higher than man's, and they behave like man's with reference to pressures over 140 mm. The diastolic pressures of healthy men increase with weight and age in about the same proportion as the systolic pressure. It is possible that a diastolic pressure above 94 mm. is in the danger zone. The diastolic pressures of healthy women are a trifle lower than man's up to the age of 40, and a trifle higher after the age of 50.

#### CHILLS FOLLOWING TRANSFUSION OF BLOOD

The number of chills which follow transfusion of blood, Richard Lewisohn, New

York (Journal A. M. A., Jan. 27, 1923), believes can be reduced by proper blood tests, careful technic, and strict attention to the indications. The percentage of posttransfusion chills is about the same, no matter what method is used. In a series reported, posttransfusion chills were encountered in 23 per cent. after the citrate method, and in 34 per cent. after the Unger stopcock method. Mixture of sodium citrate with blood in the proportion of 0.25 per cent. does not affect the vitality either of the erythrocytes or of the leukocytes.

#### ACUTE INTESTINAL OBSTRUCTION CAUSED BY A FECAL IMPACTION IN MECKEL'S DIVERTICULUM

In a search of the literature, Ralph Boerne Bettman and David Mitchell Blum, Chicago (Journal A. M. A., Jan. 27, 1923), were unable to find any other case in which a fecal impaction starting in a Meckel's diverticulum had collected sufficient solid material to cause a fecal impaction and obstruction. About 8 inches above the ileocecal valve, the ileum abruptly became markedly distended, the intestine was livid, and the serosa was injected. At this point a broad based pouch, evidently a Meckel's diverticulum, protruded from the antemesenteric border of the intestine. The diverticulum and the ileum proximal to it, for a distance of about 5 inches, were distended by a doughy, semisolid mass, containing numerous small, hard lumps. The intestine above this was distended by gas and fluid. There had clearly been a fecal impaction, starting probably in the diverticulum, and causing an acute intestinal obstruction. As much of the impacted mass as possible was milked into the large intestine. After partial reduction of the impaction, careful palpation of the intestine gave no evidence of a stenosis, or of any fixed intra-intestinal mass. The abdomen was closed in the usual manner, without drainage. In addition to the usual postoperative treatment of simple laparotomy cases, the child was given intramuscular injections of pituitary extract. Colonic flushings were alternated with olive oil retention enemas. The boy made an uneventful recovery.

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Meeting Place, Tulsa, May 15-16-17, 1923.

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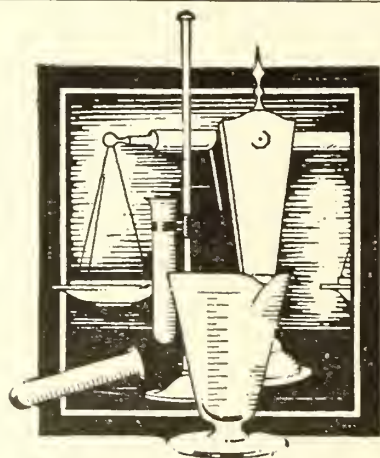
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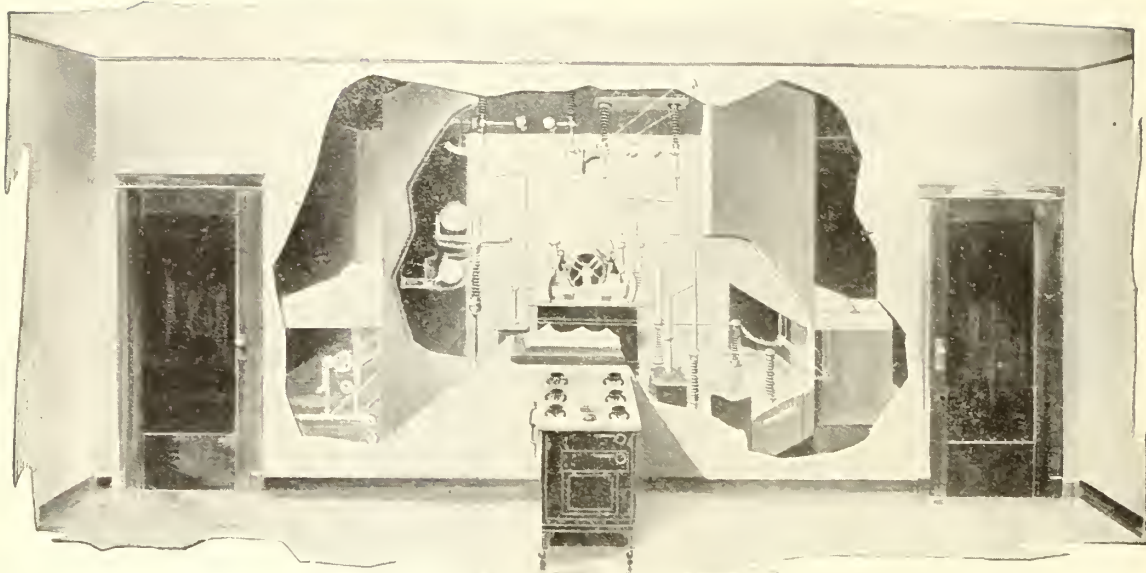
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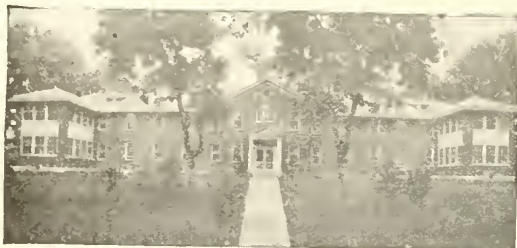
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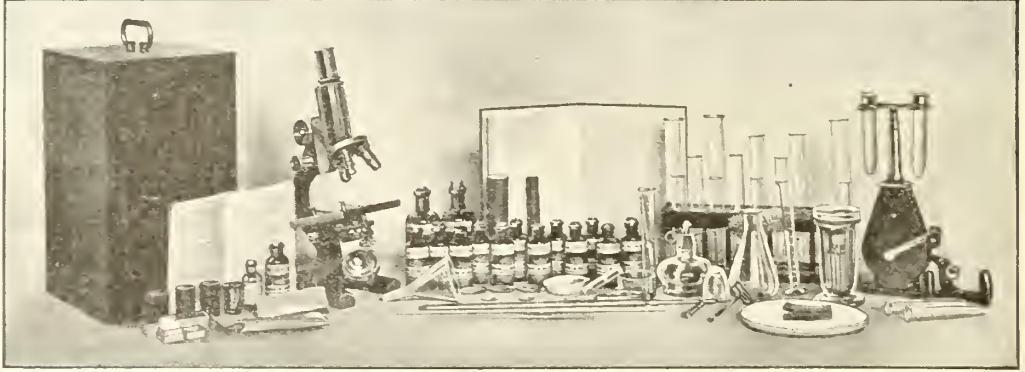
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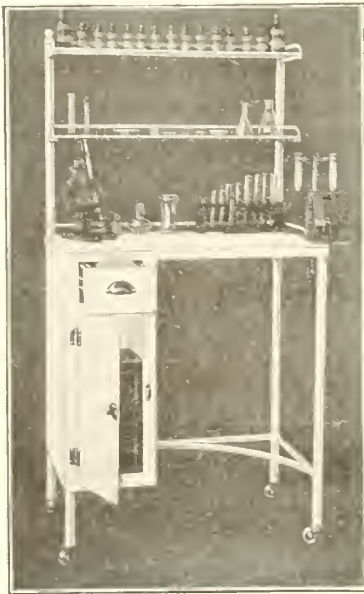
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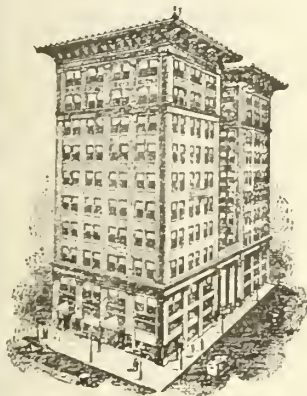
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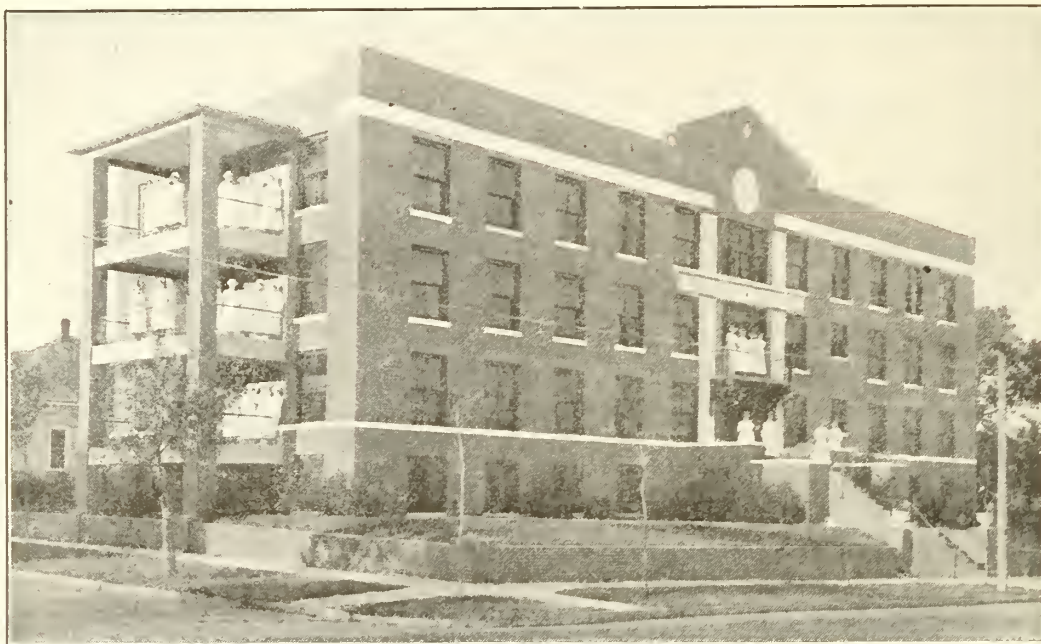
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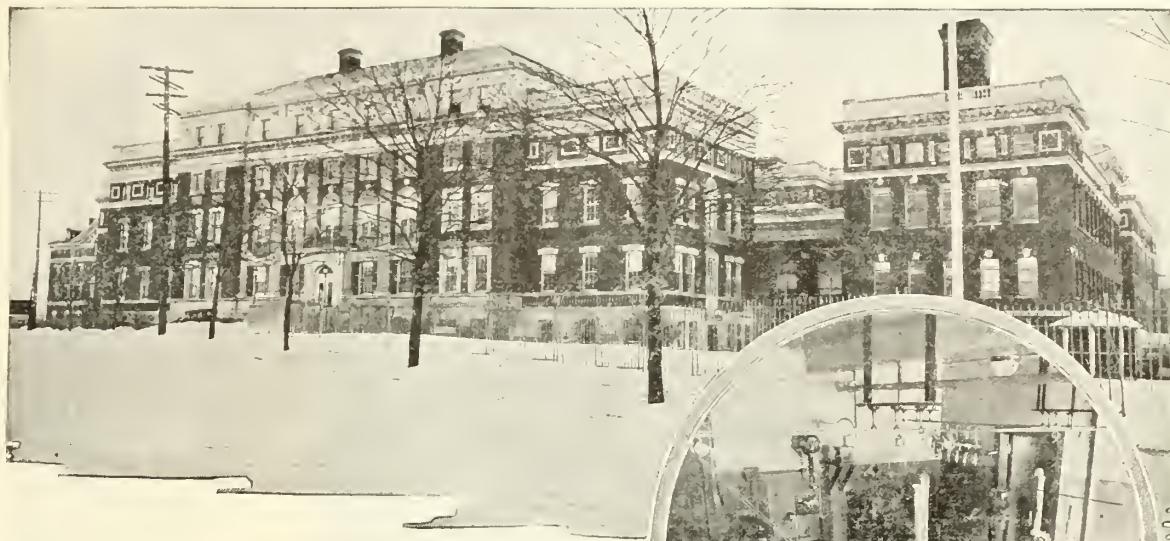
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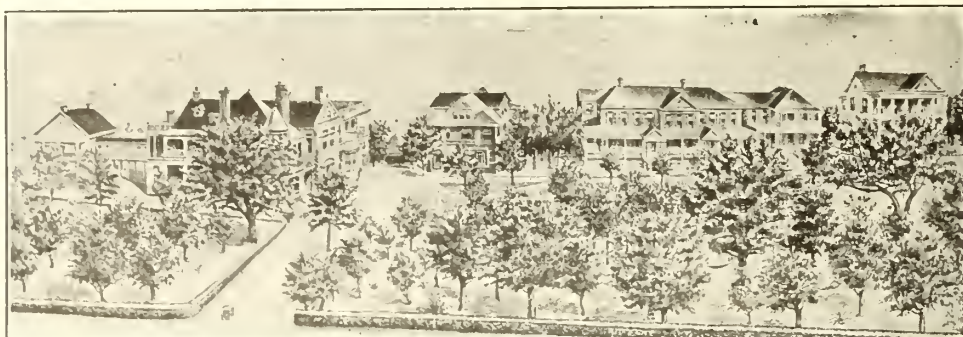
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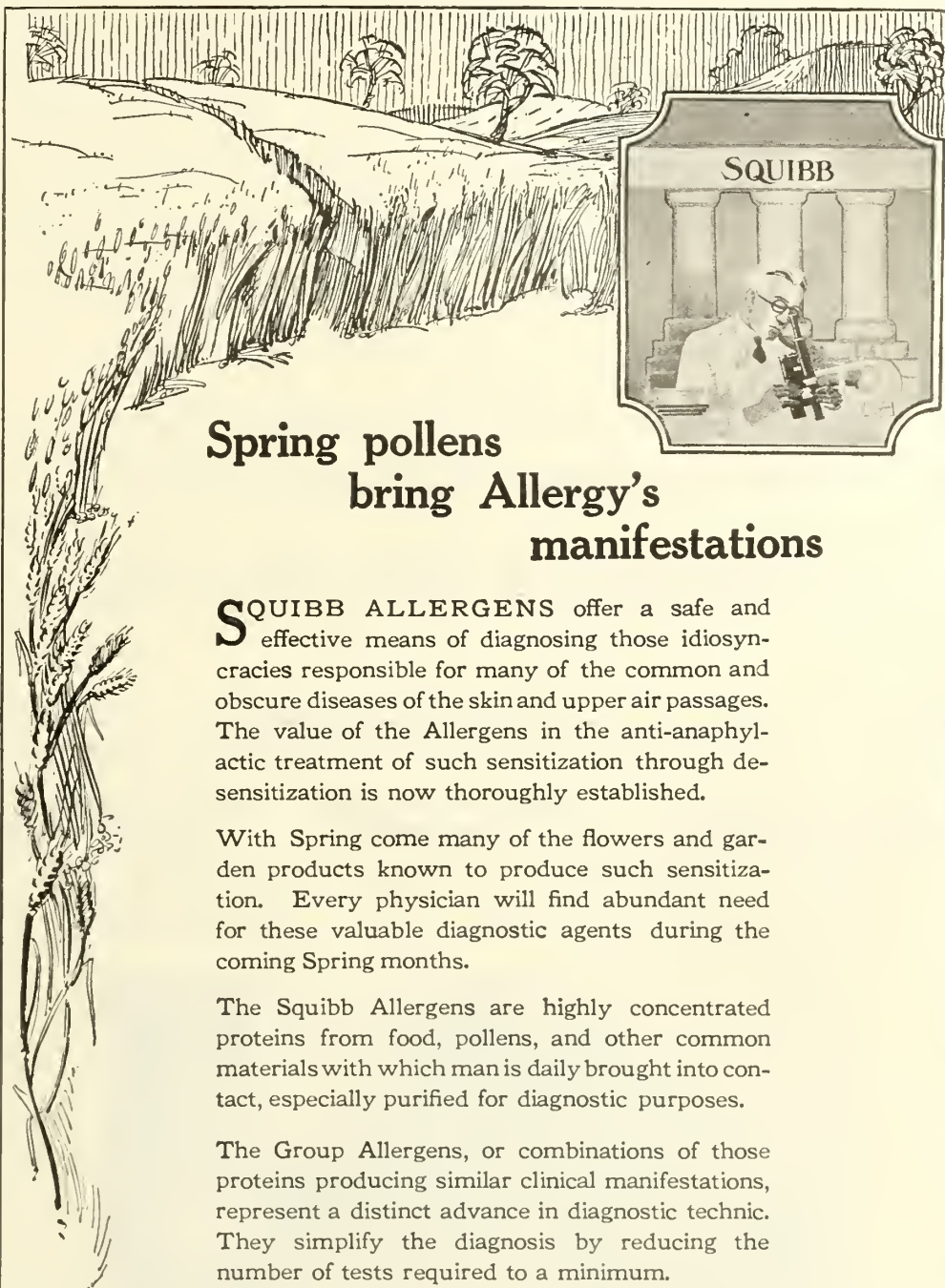
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# THE JOURNAL

OF THE

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### PRIMARY ACIDOSIS AS SEEN IN INFANTS

NEVIN J. DIEFFENBACH, B. Sc., M. D.,  
Tulsa, Oklahoma

It is my purpose in this paper to show that there exists an acidosis which is distinct in itself and not secondary to any other ailment before, or during, its course.

By this term is designated a condition in which there exists a diminution in the alkali reserve of the body, that is, a decreased amount of alkaline salts in the blood and a low carbon dioxide content of the alveolar air.

Acids that are present in this condition are: b. oxybutyric acid, acetoacetic acid, and acetone. In other instances as in acidosis or diarrhea in infancy, it is certain that these bodies play no part whatever, and that there is little or no increase of them in the blood. Acid substances of other nature are operative here.

The relative excess of acids of the blood may be due, either to an over-production of acid-bodies, to a failure of the lungs and kidneys to excrete them in sufficient amount, or possibly to a loss of bases from the body. Thus, the removal of alkali from the system might produce acidosis as well as the formation of an excess of acids.

The acetone-bodies are normally present in small amount in the blood and urine of healthy infants, never exceeding one centigram in twenty-four hours. A sharp distinction must therefore be drawn between acetonuria and acidosis. This is necessary on account of the wide-spread confusion which has arisen, according to which acidosis is supposed to be always indicated by the acetonuria. **ACETONURIA**, consists merely in the presence of acetone-bodies in the urine. It is a matter of excretion and may or may not be accompanied by symptoms of acidosis. **ACIDOSIS**, on the other hand, as has been stated, is characterized

by a relative decrease in the alkalinity of the blood independent of the amount of the acetone bodies which is being excreted. It may occur without the presence of any of these bodies in the urine, and may depend upon other acid-substances; possibly acid phosphate, lactic acid, or the like. It is only by the presence of characteristic symptoms and laboratory tests that the diagnosis of acidosis can be made with certainty.

**DIAGNOSIS.** There are certain symptoms which are suggestive of the disorder. Among the earliest of these may be mentioned restlessness, sleeplessness, excitement, and others tending to prostration, somnolence and coma. The only positive symptom apart from the laboratory tests, is hyperpynea. This consists in a remarkable alteration of respiration, with deep and exaggerated inspiration and expiration, usually not increased in rapidity, and constantly present; yet without any functional or organic disorder of the lungs or heart to account for this, and without cyanosis. The degree of hyperpynea is directly proportional to the reduction of the alkali of the blood, as shown by laboratory tests.

**PROGNOSIS.** The prognosis is, in most cases, unfavorable, if once the symptoms are well developed, death is liable to occur. The relief of coma and hyperpynea may be effected, at least temporarily, but with only a deferring of the fatal issue. Coma may return and death result without the re-development of urinary symptoms to account for it.

**TREATMENT. A.** Cases seen in the early stages should be given large doses of alkalinity by mouth, and as much of a 10 per cent. glucose solution, by rectum, that patient will retain, (generally two to three ounces.)

**B.** Cases seen when symptoms are well developed, should at once be given a hypodermoclysis of normal saline (not less than 120 c.c.), to be followed not earlier than thirty minutes by an intravenous injection of a

10 per cent. solution of glucose. The amount of glucose to be given should be governed as to the weight of the infant; that is 10 c.c. to every pound of body weight.

The dosage of alkalinity to be given by mouth should be great enough to produce the urine, alkaline. In normal infants it requires two to four grains of sodium bicarbonate to produce the urine, alkaline, while in acidosis it may require four to ten times this amount.

## NEUROSYPHILIS, ITS DIAGNOSIS AND TREATMENT

M. Q. HOWARD, M. D.,  
Oklahoma City, Oklahoma

### TYPES OF NEUROSYPHILIS

Because of the occurring of some of the same symptoms in all types of neurosyphilis, a clear cut set of symptoms for each type of chronic infection is not found and classifications are unsatisfactory. A classification that is based on the anatomical location of the lesions gives a satisfactory method of differentiating the forms for a working basis. One that conforms with that offered by Southard and Solomon (1), is perhaps as simple and yet as comprehensive as any. This classification recognizes six types of the infection. (a) Diffuse neurosyphilis, primarily a non-vascular form beginning with changes in the spinal and cerebral meninges with subsequent involvement of the gray and white matter of the cord. (b) Vascular neurosyphilis, in which there is a thickening of the walls of the vessels, a decrease of the size of the lumen with a consequent obliteration of the arterial channel or the formation of a thrombus in the vessel. There is frequently a convolutional atrophy and patches of necrosis or degeneration throughout the brain stem. (c) General paralysis of the insane. (d) Tabes Dorsalis. (e) Gummatous neurosyphilis, gumma of the membranes of the brain and cord and of the brain and cord substance itself. (f) Juvenile neurosyphilis, which may be of the diffuse, tabetic or parietic type.

### DIAGNOSIS

As this classification is based mainly on the anatomical location of the lesions the symptoms to be expected are those incident to the altered function of the part involved. All types are more or less closely associated with the six positive tests for neurosyphilis, a positive Wassermann with the blood serum and spinal fluid, an increase of the spinal

fluid cell count, an increase of the globulin and albumin and reaction of the fluid to colloidal gold in the syphilitic zone.

The DIFFUSE TYPE is very closely associated with the six positive tests. Early involvement of the meninges is common, giving rise to two sets of lesions. First, the tabetic type, due to spinal root neuritis, which condition is incidental to spinal meningeal inflammation. Second, an asymmetrical and focal atrophy of the cranial nerves due to the meningeal process at the base of the brain. Associated with the meningitis are the seizures that are frequent in this type of infection. Vascular changes may be noted but such changes are dependent on the primary inflammatory and degenerative processes. These vascular changes are responsible for the involvement of the numerous fibers of the cord as well as changes in various parts of the brain stem. Other parenchymatous loss due to the destructive lesions may be marked and are probably due to interference with the vascular system. We may expect then in this type of infection, headaches and pain in other parts of the body, generalized or confined to definite nerve root zones. Other early symptoms may be vertigo, irritability, insomnia, depression or anxiety when the involvement centers in the brain. When the cord is the site of most of the involvement the earlier symptoms are more apt to be those of pain and weakness particularly in the legs and easy fatigability. Further involvement of the nervous system is characterized by pupillary disturbances, seizures, gastric crises, sensory disorder and sphincter paralysis. In about twenty-five per cent. of cases there is disturbance of gait and coordination. The tendon jerks in most of these patients are increased, they may be undisturbed or infrequently absent or diminished. The superficial reflexes more often are unchanged but they may be lost, sometimes unequal. Abnormal reflexes seldom are present, the Babinski occasionally is found but generally associated with hemiplegic conditions. Cranial nerve involvement is frequent and it is chiefly the second, third, fourth and fifth and eighth nerves that are affected.

The VASCULAR TYPE too is closely associated with the six positive tests but not as consistently as the diffuse type. The onset of the vascular type may be sudden or slow. It frequently is ushered in with an apoplectic or epileptic attack, or the first sign of the condition may be a paralysis, usually of an upper motor neuron

type. The location or extent of the paralysis may vary from a weakness in the fingers to a complete hemiplegia. If the onset is gradual the symptoms are similar to those of the diffuse type such as headaches, vertigo and nausea. The condition is gradually progressive but sometimes a remission is noted of varying periods of time. It is in this type that aphasia is generally met with and usually it is non-comitant with the paralysis. In general the symptoms are those incident to arteriosclerosis and cerebral thrombosis. Inflammatory and degenerative changes are subordinate to the vascular changes. We may then look for in this condition, pupillary changes, seizures, paralysis transient or permanent, aphasia, hemianopsia, sensory disturbances, intracranial pressure symptoms and Meniere's syndrome.

The PARETIC TYPE presents a picture that is fairly well known, speech disorders, pupillary changes, amnesia, quick shifting emotions, character changes, conduct slump and the typical reaction of the spinal fluid to colloidal gold. The blood serum Wassermann reaction in this type is positive in about 100 per cent. of cases.

Of the TABETIC TYPE little need be said regarding a diagnosis. The five most frequent symptoms being, absent knee jerks, Argyll-Robertson pupil, Rombergism, step-gate gait and lightning pains. The blood serum will not react positively in the Wassermann test as consistently as will that of paretics nor that of those with the diffuse or vascular types of infection. The spinal fluid reaction to colloidal gold is usually characteristic in tabetics.

In the GUMMATOUS TYPE of infection a neoplasm varying in size from a pea to a walnut is the typical lesion. The growth generally starts in the region of an arterial trunk and by a process of continuity may involve as much as an entire lobe of the brain. Occasionally the first site of involvement is found along the brain stem most frequently in the interpeduncular space. Among the early symptoms of this condition are headache and other evidences of intracranial pressure, often shortly followed by fainting spells that may or may not be of an epileptiform nature. The later symptoms in the course of the condition depend on the location of the lesion. In this type of infection the Wassermann with the blood serum is often negative and is more frequently so with the spinal fluid.

The JUVENILE TYPES namely the diffuse, tabetic and paretic resemble very closely the same types in adults. The same symptoms are recognized and the diagnosis is made in the same manner as in the corresponding types in adults.

### TREATMENT

The treatment of neurosyphilis today varies with almost every current article that appears on the subject. Without reviewing the different methods of treatment let it suffice to say that good results have been obtained in many instances by intravenous therapy alone. Others report that intraspinal methods offer the only solution to the problem of treatment in this condition. It has been the plan of the writer to treat these patients with vigorous intravenous methods first and in the event there is no improvement intraspinal treatment is used.

Since there is a possibility that with the inauguration of medication the patient's natural or acquired resistance is lowered and since it has been definitely shown that the spirochete can become arsenic or mercury fast, treatment is given to the limit of the patient's tolerance. The plan of treatment is as follows, modified of course to meet the individual patient as regards tolerance of drugs and the reaction to the different phases of the treatment.

The iodides are given first, for a period of a week, 70 to 90 grains daily. This medication seems to render the system in a more receptive condition for the subsequent administration of the spirocheticides. Mercury is then given three times a week, intravenously, until twenty-four doses have been given. (2) This is followed at once by intravenous injections of neoarsphenamine. No particular reason can be seen for any delay between the administration of the two drugs. The neoarsphenamine is given twice a week in doses beginning with .75 gm. increasing to .9 gm. after the second injection. Eight doses of this drug are given. If a patient has any untoward reaction he is treated subsequently by an alteration in the size of the dose rather than in the frequency of the dose.

In two weeks after the completion of the first course a second is started similar to the first except that the iodides are omitted. Two weeks after the completion of this course a Wassermann is made with the blood serum and a complete examination is made of the spinal fluid. If no improvement is noted, that is, no change in the

strength of the Wassermann reaction, globulin and albumin still in excess, cell count abnormally high and no change in the colloidal gold reaction, intraspinal medication is then employed. If a patient tends to improve under intravenous therapy that form of treatment is continued. Improvement in subjective symptoms without clinical changes are not regarded as an improvement but rather as a remission, a phenomenon likely to be observed in any form of neurosyphilis.

When intraspinal treatment is employed mercurialized serum is first given. The patient's own serum is used and about 30 c.c. of blood is drawn for this purpose. As soon as the clot is well organized the serum is pipetted off and centrifugalized. To this serum, which should be four or 5 cc, is added 1-50 gr. of mercury bichloride. The spinal canal is entered in the prescribed manner (which includes anaesthesia of the skin and subcutaneous tissues) and 15 or 20 cc of fluid withdrawn. The prepared serum is then allowed to run into the canal by gravity. These injections are given twice a week for eight doses and if they are administered with the maximum amount of care they should not be attended with any severe reaction.

It has been the experience of the writer, however, that the administration of arsphenamized serum intraspinaly is attended with a much larger percent and more severe untoward reaction than with mercurialized serum. In some instances the reaction was so severe as to forbid further injections, the most severe reactions were noted when the injections were made into the cisterna magna.

In a series of sixteen cases where the spinal fluid was drawn immediately following intravenous injections of neoarsphenamine and tested qualitatively for arsenic the presence of that drug was demonstrated

in seven cases within five minutes following the injection. It appeared in the fluid of the other nine cases within ten minutes. Since the arsenic finds its way so quickly to the spinal fluid under normal pressure, a considerable amount of it should be present if the canal was partially emptied following the intravenous injection of the arsphenamine. When the drug is given in serum directly into the spinal canal the dose must be a very small one, seldom exceeding three or four gm.

In view of these facts the following method was used in giving neo-arsphenamine. Nine-tenths gm. was dissolved in 50 cc of doubly distilled water. Normal saline was not used because the greater the hypotonicity of the solution the more of the drug should reach the spinal fluid and the tissues it drains. The solution was given either by gravity or by the syringe method into a vein and the spinal canal then drained of 20 to 30 cc of fluid. This technic is followed by as few and no more severe reactions than those that follow the ordinary spinal drainage.

The treatment for the different types is practically the same except that greatly advanced cases are treated more intensively than others. It has been found by this method of treatment that all cases of neurosyphilis respond to treatment. The improvement in some was to the extent that it was called a cure. In others it was only temporary and the six tests that had become negative later returned positive.

Below is tabulated the results of treatment of 82 cases of neurosyphilis of the different types. In the group were six patients with juvenile paresis. Some interesting results were noted in connection with the treatment of these patients. One unusual fact was that when a negative Wassermann was obtained it remained so. In all the other types there were cases that shifted from negative to positive several times. In adult paretics with marked mental changes, no permanent results were obtained with treatment. Juvenile paretics with the same degree of psychopathology reacted more favorably to treatment.

TABLE 1

Type And Number of Cases	After Intravenous Treatment			After Intraspinal Treatment			
	Complete Negatives	Partial Negatives	No Change in Serology	Number Treated	Complete Negatives	Partial Negatives	No Change in Serology
25 Vascular and Diffuse	2	6	17	23	8	2	13
40 Paresis	2	10	28	38	6	4	28
8 Tabes	0	2	6	8	3	1	4
3 Gumma	2	1	0	1	0	1	0
6 Juvenile Paresis	1	2	3	5	2	1	2
Total	7	21	54	75	19	9	17
Total Percent			51	Total Percent			59

TABLE 2

JUVENILES	E. D.				S. B.				C. T.			
RESULTS	B	F	G	GOLD SOL	B	F	G	GOLD SOL	B	F	G	GOLD SOL
After two intravenous courses	+	+	+	5555500000	+	+	+	5555500000	+	+	+	5555310000
After first intraspinal course	+	—	—	2234400000	+	—	—	0000000000	—	—	—	5544320000
After second intraspinal course	—	—	—	0000000000	—	—	—	0000000000	—	—	—	2331100000
ADULTS	L. K.				C. S.				F. O.			
After two intravenous courses	+	+	+	5522100000	+	+	+	5555553100	+	+	+	5555500000
After first intraspinal course	—	+	—	3332200000	+	+	+	5555530000	—	—	—	1224400000
After second intraspinal course	+	+	+	5555500000	+	+	+	1144400000	—	+	+	5555500000

Table two compares three cases of juvenile and three of adult paresis. The duration of mental symptoms is about the same in all six cases. It was observed with these six patients that the adult cases progressed more rapidly than did the juvenile that did not respond to treatment.

#### SUMMARY

1. Five types of neurosyphilis are rec-

ognized based on the location of the lesions and a fairly constant set of symptoms ascribed to each type.

2. The six positive tests are of more value in interpreting a cure than in making a diagnosis.

3. As many cases respond to intravenous therapy alone that form of treatment should

be used first.

4. Arsenic appears in the spinal fluid within ten minutes after intravenous injections of neo arsphenamine.

5. The reaction from mercurialized serum intrasphinctally is not as severe as that from arsenophenized serum. Because of the reaction and the limitations of the dosage arsenophenized serum was not given.

6. Juvenile paresis does not progress as rapidly as the adult type and responds more readily to treatment.

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#### MY FOUR YEARS' EXPERIENCE AND OBSERVATION AS A MEDICAL MISSIONARY IN CHINA

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What I may say from a medical standpoint, regarding conditions in China, is true only, in so far as it is my interpretation of conditions in the region, in which I have lived, and for the time I was there. China being a large country, and having a variety of climate, very few general statements can be made. A people's physical condition is so much determined by their surroundings, climate, social, economic and religious, that I will have to dwell on each of them more or less.

My purpose in preparing this paper, is not that you may get much medical education, but that you may be able to see these people, and their condition, through my eyes, and my experience; as perhaps few of you have had or will have, the opportunity of being in China, for any length of time at least.

You must not think of the Chinese as uncivilized, for they are not. They date their civilization back to perhaps a thousand years before ours began; but theirs is heathen, while ours is Christian, and thus vastly different.

One of the most outstanding features in China is the extreme poverty of most of the people. I am sure this one thing is true of all China. Each year thousands starve to death; and I presume about half

the people have all they wish to eat only once or twice a year; the rest of the time having merely enough to keep body and soul together; thus they merely exist. Therefore, from a medical standpoint, we are dealing with a people, the mass of whom are underfed and undernourished.

Most of China is very thickly populated, but I believe that the population is not increasing, this being especially true of the Shantung Province, where I spent four years. This is not true due to babies not being born; but when I tell you that in China from 50 per cent to 75 per cent of the babies born, die, before they are two years old, you will see the reason for the lack of increase in population. This is due to several reasons. The Chinese do not use milk in any form; therefore if for any reason the mother is unable to nurse her child, and a wet nurse cannot be procured, the baby dies.

Such diseases as small-pox, scarlet fever and diphtheria are prevalent all the time, as there is no quarantine. They know nothing of the origin or causes of disease, therefore do not know that contagious diseases should be isolated. Say a baby has scarlet fever; they do not disinfect or destroy the clothing the child has worn, but if the child should die, the clothes are passed on to the next baby, and a whole family may die. The same is true of any disease. Small-pox is so prevalent that some parents do not count their children until they have had small-pox.

One pitfall the Chinese children do not have that ours have here, is the danger of being run down and killed by an automobile driven by some drunk or reckless driver who thinks he owns the world; for about the fastest vehicle they have is a wheelbarrow pushed by a man, or a two-wheeled cart, drawn by a lazy mule or donkey, which seldom travels faster than a walk. There are a few autos in the larger port cities, but absolutely none in the interior.

You ask in your mind about the native doctors. They know absolutely nothing about surgery, and very little about drugs, and less about diagnosis. They are just as apt to cut into an aneurism, as any other swelling or lump.

For diarrhoea of any kind, the most common treatment is watermelon, if it can be had. His chief resort is to bleeding, and he is apt to bleed for any and all diseases. For instance, the main treatment for Asiatic Cholera is bleeding, and they do not pre-

tend to know anything about asepsis.

They have their temples of medicine to which any sick or suffering ones may resort. There are many prescriptions written out and hung in rows on the wall, each prescription being numbered. A sick person comes to the temple, pays a sum of money to the priest; he in turn takes a bowl of incense sticks and shakes them three times so they may be thoroughly mixed; the sick man then draws one, and as these are numbered to correspond with the numbers on the prescriptions, he finds the proper prescription and goes to a heathen drug shop to have it filled.

There are about all the diseases in China that are common to us here, with a lot of others. There you see all kinds of skin diseases and in the most exaggerated forms, due to the long delay in seeing a doctor and the unclean condition of the patient. Leprosy is quite common and another disease which we in China speak of as Endoarteritis obliterans. The pain is constant and more or less severe, and our experience is that amputation does absolutely no good. Some cases treated with a moist aseptic dressing have gotten well after a time. As to a permanent cure, cannot say, as we could not follow cases up for long periods.

Another condition which we found quite common was markedly enlarged spleen, quite possibly Kala-Azar. It was found mostly in boys between the ages of from three to four, up to thirty. The best results seemed to follow splenectomy, but where we could follow it up, some had good results from intravenous injections of Tartar emetic. One interesting thing was, that most of these patients came from certain villages. Stones in the urinary bladder was another very common disease and here again the patients nearly all came from certain villages. Was it due to the water? One of the saddest things to us doctors, was that we were unable to go into these things and work them out, due to the lack of time, money, and equipment.

One of the most common of all diseases was round worms (*Ascaris Lumbricoides*). The Chinese eat a lot of vegetables, often not well cooked. Also, all human excreta is used as fertilizer. We consider every patient having any trouble in the abdomen as having worms, and first give a good treatment for same; and it is surprising how many need nothing more. It is wise to give all operative cases a round of worm medicine before giving an anesthesia, as

the worms sometimes come up in the throat, causing danger of choking. Also the chloroform usually puts the worms to sleep and they form balls in the intestines after operation and cause intense pain, and in some cases complete obstruction. It is nothing for a patient to pass as many as a hundred or even two hundred after a good round of worm medicine.

Here is where one sees scabies in all stages and forms; also the ravages of syphilis, due to lack of treatment. Here one sees a great deal of hereditary syphilis. Still I do not believe there is as large a percentage with syphilis in China as there is in our own country. We have noted how rapidly most of these cases improve under 606 injections, mercury and K. I., seemingly more so than in this country. May it be that the *Spirocheeta Pallida* is becoming more or less immune to the treatment? Another strange thing; I do not remember ever having seen a case of *Tabes dorsalis* among the Chinese, while the tertiary of the bones is very common.

The question naturally may arise in your mind as to the moral life. Purely sexual, I believe China is the best of any nation morally, not excepting our own. I do not hold that they are any more virtuous, but due more probably to the social and economic conditions. The two sexes do not intermingle as they do here. As a rule they are very poor and have no extra money to spend also they usually marry much younger than is customary here. The boy and girl are usually engaged very young, before they are ten. All this is arranged by the parents and the boy and girl seldom see each other until after they are married. The girls are kept in very closely and often the only men they see before they are married are very near relatives. An engagement is seldom broken.

Our work with leprosy was very interesting. We used the oil of Chaulmoogra, given intramuscularly once a week. We had one case who, after a year under treatment, all symptoms cleared up. Only time will tell whether the cure is permanent. It gave us quite a name, and lepers came to us from far and near. Most of the cases showed some improvement, but none other so marked as the one first mentioned. It was most remarkable how all his open sores healed. How through time the anesthetized white areas of skin became pink, and sensation returned, and even hair over these areas, and the eyebrows came in again.

Were we busy? In the district where

we worked it was estimated there were from three to four millions of people. There were two foreign doctors of us, with one Chinese doctor, trained in a mission medical school. Usually we spent all morning operating, and sometimes we would have every hour filled two weeks in advance. Our afternoons were spent in seeing patients which averaged anywhere from twenty to seventy-five a day. We were able to spend only a few minutes with each patient and very often we had to make only snap diagnoses. Many of the cases came in with awful tumors, which in most cases were past curing. In my four years I saw only one case which was diagnosed appendicitis. It is an open question among doctors of China as to whether there is much appendiceal trouble. One thing is true, that we see very little of it, but it may be that they do not come to us, as most of the Chinese object to an abdominal operation and would sooner stay home and die rather than submit to one.

One of the most awful experiences I had while in China was going through an epidemic of Asiatic Cholera. For my last year there, I was transferred to another field, where I was the only doctor; the field was smaller, there being only about two millions of people. I was stationed at the city of Djung-djo-fu, situated on the Northern Coast of Shantung. The ships come across the bay bringing people from Manchuria and Siberia. We had heard there was Cholera in those countries. One hot Sunday morning in July, two dead men and three sick ones were taken off one of the boats. All were well when they left the other side of the bay the night before. There is no quarantine, therefore the sick ones were allowed to go where they pleased. It happened that each went to a different part of the city. Each had the dreaded disease, which spread so rapidly that within three weeks it was all over the city. As you know, Cholera is an intestinal infection, caused by the Comma Bacillus of Koch. Koch found the Bacillus only in the intestinal track and the destructive process is caused by the toxic bodies liberated by the Bacillus. Very often the disease comes on very suddenly and severely, and may cause death within a few hours, or not for several days. If they live for several days they usually get over it, unless some complication sets in, the most common being that of the kidney. The symptoms as given in the last edition of Osler are very typical of what I saw in China. The most marked things being the awful diarrhoea and vom-

iting. The facial expression, wasting of the whole body, and the intense cramp, especially in the lower extremities, in the worst cases only. The extremities soon become cold, voice becomes husky and there is complete exhaustion. The typical pea soup bowel movement, which soon becomes involuntary and every few minutes. If you puncture a blood vessel, you find the blood almost black and so thick it will scarcely run. Extreme thirst. I can never get the awful picture out of my mind—asking for water, which is scarcely swallowed until it is vomited up again; and the screaming caused by the intense pain in the legs.

Perhaps the greatest strain on me, was my responsibility for the other Americans, some twenty-five in all, including my own wife and two babies, and with no other doctor nearer than a two days' call. I feel sure in this epidemic that the disease was spread mainly by the fly. We had all our houses screened and every fly inside killed. I prohibited anyone from eating any food that had not been well cooked or scalded with boiling water. All drinking water was boiled, but this we did at all times. As the comma bacillus cannot live in anything but an alkaline or very slightly acid media, we used some acid in all our drinking water, mostly dilute sulphuric and citric. I am happy to say we all remained at our work, and went through those awful six weeks without contracting the disease.

The treatment was what bothered me at first, as I had never seen a case before. When I could get to the cases early, within the first half hour in the worse cases, to a half day in the milder ones, I found an old shot gun prescription which had been used in China by the early doctors, to be the best thing. I cannot give it to you exactly as it was used, but the main things in it were as follows: Tinct. Catechu, Tinct. Digitalis, Glycerine, Alcohol, dilute Hydrocyanic acid, and several carminatives such as Tinct. Capsicum, Peppermint, etc., there being, I think, nine different drugs in all. You will no doubt be surprised to find that there is no opiate in this prescription. I tried the Sun Cholera Mixture, which has a lot of Tinct. Opium in it, but got much better results from the other. It was given in small doses, every half hour for four doses, then every two hours until much better. We trained Chinese helpers who took the medicine out over the city and into the surrounding villages. Those I saw in which the prescription did not stop it, I gave large doses of Morphia, hypoderm-

ically, with good results. Two other doctors came and helped me for two weeks during the worst of it. We opened a hospital in an old temple where the worst cases were brought and there we gave intravenous injections of salt and soda sol. This had the most marked effect. Some cases were so far gone we could not get into the veins. Sometimes when we could not get into the veins in the arms, we could get into the veins in the neck. When we were able to get the salt sol. into them, they usually recovered. Toward the end of the epidemic I was able to get some Kaolin, and in some extreme cases had marked results. It is thought to absorb the toxins in the intestines and thus they are passed off. I know in several cases it seemed to work wonders. One case in particular where the man seemed almost dead. The extremities were cold, no pulse. I could not even get into the vein in the neck. Within three hours his limbs were warm and a good pulse. I was able to do an intravenous. I should like to see it tried on some of the acute intestinal infections in this country.

The general mortality over the city was estimated at about 50 per cent. That of the hospital where all the cases were of the very worst, was just under ten. It was estimated that some 30,000 died in the country alone. As a rule they were from the poorer families, among the undernourished. In China you have a condition of the survival of the fittest. The weak die, the strong are left; thus those who survive are usually quite hardy.

Foot binding is still quite generally practiced. The bones of the foot are not broken, but are more or less disjoined, and being kept tightly bound from the age of four or five never develop.

The practice of Obstetrics is most rudimentary. Some old woman takes care of the case. She has no thought of being clean. If the birth of the child is delayed, she may tear the perineum with her long finger nails. Her hands have not been washed. If the child cannot be born normally, both mother and child die within a few days. If the patient should be torn little or much, there is no attempt at repair. When the child is born they use any kind of dirty string to tie the cord and dirty scissors to cut it. Sometimes it seems a wonder that any mother survives or any babies live. If an arm or leg comes down, they pull on it, sometimes even pulling the member off. They are always worried about

the placenta not coming away. If it does not come soon of itself, they have the woman chew their hair, cramming the whole braid into her mouth. The result is that it tickles the throat and causes her to strain and vomit, and very often out comes the placenta and the hair gets the credit. When the child cannot be born, or is not born as soon as they think it should be, the poor woman is said to have evil spirits in her, and is beaten to drive out those spirits. Should the mother be unable to nurse the baby and they are unable to get a wet nurse, the baby usually starves to death, as the Chinese do not use milk, and know nothing about feeding babies artificially. The baby must not be bathed until after the cord comes off and the nails must not be cut for ninety days. Usually they are not weaned until they are from two to four years old, unless another one comes, and then very often they are nursed by the grandmother.

The foreign doctor is never called in except where there is extreme trouble. I shall state two or three cases which will illustrate what we are up against. One day I was called out into a home where I found the woman had been in labor three days with arm prolapsed two days. I had a Chinese nurse whom we had trained give the anesthetic. I found the baby dead and more or less of a tonic uterus—baby was transverse. It was quite a simple matter to break the baby's neck, take out the body, and in this case the head followed very nicely. Mother had an uneventful recovery.

Another case was brought into the hospital, where the arm had prolapsed, and they had pulled it off; had a very tonic uterus, with patient nearly dead. Baby was dead. It was extremely hard to break baby's neck and extract body. Was unable to get head promptly, and patient died.

Perhaps the most interesting case I had, was one during the cholera epidemic. She was just about due when she was taken down with cholera. The cholera subsided, but it killed the baby and she went into labor. She was so run down from the cholera that there was no strength left. After being in labor two or three days they called me. I had her taken into the hospital where I found very little dilation, with almost complete exhaustion. I did manual dilation and version. The hospital was a two story building and she feared it would fall on her, so begged to be taken home, which we permitted on the third day. She made a wonderful recovery and they thought of

me as being superhuman.

In closing, allow me to make a few general remarks regarding China and her people. As you live among the Chinese people, you have a deep regard for them. Here you find a people who can be conquered, but cannot be obliterated as a race, but will absorb any people who try to destroy them, as proven by past centuries. Their extreme poverty, simplicity and loyalty to friends, as a whole, must appeal to anyone.

The fight of the younger men and women against the old reactionary element in the government at home, and other nations who care nothing but to exploit China, for their own benefit, is sad, that it must be, yet beautiful to behold, and we who love liberty and right, can aid by our applause and moral support. The gallant fight they are making in Washington at this time, can be understood best by those who have lived in China. The fight China has been making against the awful curse of opium, forced upon her by other nations, seems at times to be a losing fight. Opium is being shipped into China, millions of dollars worth every year, by parcel post, over which she has not control, due to treaties forced upon her.

They trust us as their only friend, and depend upon us as their only support, in their fight for national integrity. China's future, interests the nations of the whole world, and each of us individually. Within the confines of China you find resources of minerals and men, which in their day may change the world. What the New China of tomorrow is, depends on the Christian Nations of the world, and upon you and me. China is asking this question of us: "Wherein are you different from us; wherein lies your power?" In giving her our education and our western ideals, we must not forget the one thing that has made us great—our Christianity.

#### SURGERY OF THE SEMINAL VESICLES\*

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In 1920 the writer presented a paper before the Missouri State Medical Association (1), reviewing therein the surgery of the vesicles and seminal tract. At that time there seemed to be a confusion of

ideas existing which prevented a correlation of thought upon this subject.

Within the past two years, the writer has thoroughly reviewed the work of others upon vesicle surgery and has, through clinical and pathological research, thoroughly confirmed his own views and the view of others who have made complete investigation of this subject.

#### SURGICAL ANATOMY AND PATHOLOGY.

Picker (2), in 1913 after an exhaustive anatomic differentiation compiled from seventy-two autopsies found in only four percent of cases were the vesicles simple straight tubes without diverticula. Thirty percent of the cases exhibited twisted tubes without diverticula while the remaining sixty-six percent were diverticulated and racemosed, one-half of this series consisting of short tubular vesicles with large, irregular ramifications. The minute pathology was not studied. Picker's findings were later confirmed by the studies of E. O. Smith of Cincinnati.

In 1910 (3) and 1914 (4) Barney published articles bearing upon the minute pathology of the diseased vesicles. Barney found that even in those vesicles which could be stripped and whose contents on vesiculotomy gave negative cultures, the walls of the vesicle, if cultured, would produce positive growth of pathogenic organisms, presenting thereby definite evidence for vesiculectomy in certain types of cases, to which we shall refer later, as against simple drainage. White (5) comes to the same conclusion. Dillon and Blaisdell (6) in their excellent microscopical studies of the pathological vesicles state: "Most urologists have reported on the drainage of the vesicles being routinely done in all cases where operative procedure was undertaken. But in studying the pathology of sections taken from different cases at operation and comparing them with the clinical manifestations before and after operation, we find that simple drainage is not always sufficient to accomplish our purpose in operating, and may account for many of the unsatisfactory results of vesiculotomies." Reporting on ten cases, eight of them vesiculectomies and two simple drainage cases, Lowsley states: "It has been our practice to operate only upon those patients in whom the seminal vesicles were enlarged and which did not empty upon stripping. When it is possible to strip them by massage the

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operation is obviously unnecessary." The latter part of Lowsley's (7) statement does not coincide with the pathological findings of Barney, Dillon & Blaisdell and ourselves.

Reporting from the latter work we find no difference in the surgical pathology and the conclusions drawn therefrom are practically the same.

## TYPES OF PATHOLOGICAL VESICLES

1. The sub-acute or chronic vesicle, usually of gonorrheal origin, showing little, if any, involvement of the wall and presenting microscopically nothing but inflammatory swelling of the lining epithelium with a tendency to a closing of or sacculation of some of the convolutions and presenting clinically only the symptoms of a persistently recurring urethritis.

2. The acute purulent vesicle with widely distended thin walls and presenting an almost complete destruction of the epithelial lining but with little or no involvement of the wall itself. The clinical symptoms are those of abscess.

3. The chronic purulent vesicle with thickened wall usually stripping rather readily, the walls, however, showing a large deposit of connective tissue; this connective tissue in some places having undergone complete fibrosis and producing an atrophy of the muscle bundles. This class of cases is the type most likely to give rise to symptoms of focal infection and may give rise to neurasthenic symptoms and perineal pain.

4. The chronic fibrosed type of vesicle in which both the vesicular and perivesicular tissues are involved. Rectal and perineal pain is usually present with persistent sacral backache. Focal symptoms are marked and bladder irritability is present.

5. The ultra degree of the pan-inflammatory type, in which there is fibrosis of both the vesicle and the ampulla of the vas with marked involvement of the perivesicular tissues. The lumen of the ampulla of the vas is obliterated as well as that of the vesicle. The secretory structures of this organ have become destroyed and as a consequence, there is a "dry" vesicle. Clinically, this type of vesicle presents great bladder irritability, rectal pain usually accompanied by hemorrhoids—for which, in fact, we have seen such patients treated and operated with no amelioration of symptoms—and marked neurasthenic symptoms. To these clinical

manifestations may be added in rare instances involvement of the lower part of the ureter to the point of stricture of this tube with complete or incomplete renal and ureteral retention, of which we have reported three instances.

## 6. The tuberculous vesicle.

## SURGERY OF THE VESICLE

To those of us who were fortunate, or unfortunate, enough to view the early surgery of the vesicles, the bloody technique, or lack of it, was sufficient to deter all but the boldest. With the development of Urology as a surgical specialty and an unusually refined technique, direct attack upon the vesicles has become a thoroughly surgical procedure; and while exceedingly difficult and not wholly devoid of trying complications in their performance, vesiculotomy and vesiculectomy yield results that are most brilliant and with a mortality rate that is practically nil.

With relation to sterility there can be no question but that sterility is produced by vesiculectomy whether or not the ampulla of the vas is resected. It has been our observation that simple drainage of the vesicle does not produce sterility and we have examined subsequent to this operation several hundred cases which gave living spermatozooids. Neither operation in so far as our observations have extended, has produced impotency. The question of sterility should not seriously be taken into consideration when the end in view is the health of the individual and when further consideration convinces us of the fact that vesicles sufficiently diseased to require removal are non-productive.

## TECHNIQUE.

We have never employed the technique of Fuller (8). After a thorough consideration of the various operations proposed we are thoroughly of the opinion that the operation employed by Cunningham (9) with some slight modifications, is the procedure of choice. It is as follows:

A semilunar incision is made with its concavity towards the rectum, sufficiently deep to expose the perineal center, or so called tendon, this incision extending from one to the other tuber ischii. Blunt dissection by means of either forefinger is made just above and to either side of the rectum, the greatest of care being taken that this latter structure is not injured. Any injury should be immediately repaired. The perineal center is divided in close proximity to the

bulb, the rectal attachment of which is grasped with a pair of Ochsner forceps. Such fibers of the recto-urethralias as may present are likewise divided close to the urethra. At this point there is usually quite a fair degree of oozing which is readily controlled by placing a sponge over the inferior aspect of the wound and by placing upon this the broad blunt retractor of Young. By blunt dissection the prostate and the fascia of Desnonvillier are exposed. We prefer here to use as a retractor on the prostate (after the method of Squier) a double No. 2 catgut suture on a sharply curved blunt round needle placed entirely through the prostate from side to side at its anterior aspect. This has the advantage of doing entirely away with a metal retractor at this point. For such traction Young uses his prostate retractor placed in the urethra and Cunningham his "fork."

The fascia of Desnonvillier is divided transversely just at the base of the prostate exposing the base of the prostate, the vesicle and the ampullae of the vasa. The flat retractor of Young is now removed together with the sponge and the lower, or rectal aspect of the incised fascia grasped on either side by two Ochsner forceps. The vesicles are now readily exposed by working along the plane of the recto-vesical fascia, **care being taken that neither the prostatic end of either vesicle or vas be disturbed in their relations to the bladder.** If vesiculectomy is to be done it should be done by blunt dissection from above downward, care being taken that the tip of the vesicle where it is in close proximity to the ureter be most carefully dissected from its bladder attachment. We have found only a small percentage of cases in which there seems to be any great danger of injuring the ureter. If vesiculotomy is contemplated, the method of Cunningham of removing the entire vesicle floor gives best results.

We have found that if the ampulla of the vas and the vesicle are divided at the base of the prostate before dissecting them from the vesical wall that the operation is rendered far more difficult on account of the friability of these structures.

The necessary ligatures are made and stiff-walled rubber tubes inserted on each side at the outermost angles of the wound in the fascial attachment. The divided fascia is now repaired as nearly as possible with absorbable No. 1 catgut sutures, a suture being placed through the fascia and each of the tubes, more readily holding them in place. The perineal center is repaired

and the skin closed with catgut sutures, the tubes again being sutured to the outer angle of the wound.

### CONCLUSIONS.

1. In those cases of persistent recurrent infection of the genital tract in the male, in which there is proven involvement of the seminal vesicles and in which there is no marked pain (perineal or rectal) and where clinical examination reveals no fibrosis, or in which there is no accompanying arthritis, the indirect method of surgery, as applied to the vesicles via of the vas (Belfield's method) (10) seems entirely adequate. Repeated injections may have to be done.

2. In cases of acute vesiculitis with abscess formation and in which there is no fibrosis present, vesiculotomy following the method above described, is the advisable operation.

3. In those cases showing thickening of the wall of the vesicle and in which there is perineal or rectal pain, arthritis, bladder irritability or pronounced neuresthenic symptoms, vesiculectomy is the procedure of choice with removal of the ampulla of the vas.

4. Excision of the vesicle and as much of the vas as may be deemed advisable is the only operation applicable to the pan-inflammatory type. In this class of cases alone is there any great degree of difficulty in operation presented. The amount of perivesicular involvement makes this operation one of magnitude not seen elsewhere in urological surgery.

5. The tuberculous vesicle is never seen without other clinical evidences of tuberculous involvement of the genital tract. After having followed closely the work of others in combination with our own experience in radical surgery applied directly to the tuberculous vesicle and adnexa we feel assured that such surgery is both inefficient and unjustifiable.

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## TWO CASE REPORTS

E. K. WITCHER, M. D.  
Pawhuska, Oklahoma

## CASE ONE.

A Lawyer of 54 presented complaining a persistent swelling Sept. 29, 1921 of both ankles, slightly more marked at present but noticed for three months past. No other complaint. Had been told by specialist in Kansas City in July that there was no apparent cause. The possibility of a focal infection from the teeth was suggested. An X-Ray examination resulted in the removal of five teeth. The patient was placed on an iron, arsenic and strychnine tonic and asked to report in two months.

The patient reported in Kansas City October 1. No further diagnosis made at this time.

## FAMILY HISTORY:

Father died at ninety-one—old age.

Mother died at fifty-six—tuberculosis assigned as cause.

One brother dead—death accidental.

One brother living and in good health at sixty-three.

One sister dead at fifty-nine—cause not known.

One sister living and in good health at fifty-one.

Father's father dead at sixty-seven—death accidental.

Father's mother dead at ninety-two—old age.

Mother's father dead at sixty-two—death accidental.

Mother's mother dead at seventy-nine—cause not known.

## PAST ILLNESSES:

Scarlet fever at five years (severe).

No venereal infection. History regarded as absolutely reliable.

## PHYSICAL EXAMINATION:

Examination reveals an adult male of age apparently forty-five to fifty. Neither obese nor spare in build. Color rather pale. Some slight discolorations on skin of face.

Nose and throat normal.

Lungs of good excursion. No rales, no adventitious sounds, no increased fremitus, no emphysema. Respiration 16 to 18.

Heart examination reveals heart apparently of normal size, no murmur, pulmonic second slightly accentuated, pulse full and regular, rate fifty-two. Blood pressure one hundred thirty-seven.

Reflexes normal, including pupillary response to light and normal accommodation.

No adenopathy. Liver not enlarged. Spleen not enlarged. Kidneys not palpable. Prostate not enlarged. Genitals negative.

## LABORATORY EXAMINATION:

Repeated urine examination negative—specific gravity 1015—1018, acid, no casts, no pus, no blood.

Wassermann negative.

Blood examination negative.

## PAST HISTORY:

Health has always been good. For a protracted period in early youth patient took Fowler's solution. He remembers that at this time there was puffiness and discoloration under the eyes.

He has been constipated for years. Found relief at first in calomel in divided doses, followed by salts, but for past several years has resorted to rectal syringe, supplementing its use with various laxatives.

Heart action has always been slow, pulse normally about fifty. Heart leakage diagnosed twenty years ago but no symptoms ever felt. Patient has never had any abnormality in urination. Does not get up at night, is not a water drinker, thinks water intake not more than one-half normal.

## PHYSICAL EXAMINATION:

Addenda: Examination in January reveals infected and hypertrophied tonsils.

## DISCUSSION:

The patient, a man of unusual powers of observation, presents with a definite desire for diagnosis, particularly for a differential diagnosis between heart and kidney trouble as the source of his ankle edema. (Has been told by clinician in Kansas City that his is an idiopathic edema). On cardiac examination and patient's own statement that dizziness dispoena exertion, palpitation, or other signs of early decompensation had not at any time been present. The possibility of a cardiac basis is discarded. On repeated examination of urine with negative results the possibility of an early kidney impairment in the sense of a definite Bright's disease is dismissed. This leaves presenting the possibility of the var-

ious foci of infection. The sinuses, nose and throat, teeth, gall, bladder and appendix disposed of by examination and absence of physical signs, the natural inference is auto-intoxication from the intestinal tract; since the prolonged use of a rectal syringe suggests the possibility of a mechanical emptying of the lower bowel without normal functioning of the intestinal tract. An apparent decrease in the edema on therapy with calomel, Cascara and the Bacillus Bulgaricus seems to confirm this.

Upon the discovery of the infected and hypertrophied tonsils with a slight increase in ankle edema the tonsils are indicated as the focus. Tonsillectomy advised and done. A slight decrease in the already slight degree of edema.

Although this patient may be labeled nephritis without the urinary signs and other symptoms, I prefer the diagnosis of an early kidney impairment from the prolonged use of arsenic. In addition we have the burden from an auto-intoxication and infected tonsils. Of importance is the fact that such a diagnosis is an incentive to the removal of foci and does not carry with it the fatalistic implications of "Nephritis."

#### CASE TWO.

A girl of fifteen presented making no complaint, accompanied by older sister, who says that her sister has complained of constant headache for over a year. Otherwise she does not complain but shows no interest in work or play.

Questioning reveals the fact that menses have been irregular—that headache did not become annoying until after first menstruation, that the girl is constipated, that she has dropped out of school on the grounds that headache prevents her learning. Apparently she prefers solitude to company and even when at home does not move about the house but prefers "to lie on the floor in front of the fire."

#### FAMILY HISTORY:

The family history reveals nothing except a record of two miscarriages in the mother's history. The father has been married several times and is a Choctaw Indian.

#### PAST ILLNESSES:

Nothing except the lighter diseases of childhood.

A deformity of the right foot from birth.

#### MENSTRUAL HISTORY:

Patient had first menstrual flow at thirteen years.

Headache dates from that time but has grown worse.

Menstruation has always been scanty, ir-

regular, and usually painful. The headache has always been more annoying just before menstruation, and on those occasions when menstruation has been most profuse headache has decreased with onset.

Headache is dull rather than sharp and is confined to no particular area.

#### LABORATORY FINDINGS:

Urine negative.

Blood picture normal; Hemaglobin 70.

Wassermann a doubtful positive.

#### PHYSICAL EXAMINATION:

In general appearance patient is normal for her age except for expression, which is markedly apathetic.

Weight of 115 pounds is about right for age and height.

Physical examination revealed nothing abnormal except congenital deformity of right foot.

There is a marked aversion on part of patient to answering questions of any kind. She appears sullen, depressed and weary. There are none of the cardinal signs of congenital lues.

#### DISCUSSION:

The frequency of lues among people of the patients race and class, with a faulty positive Wassermann, led to experimental specific therapy. The iodides, mercury, intravenously and salvarsan given over an eight weeks period had little effect. Viburnum seemed to relieve extreme pain at periods. Aromatic Cascara relieved constipation.

Corpus luteum—six intramuscular injections—given without apparent affect.

About January first the patient was placed on Ovarian extract—eight grains daily, with Thyroid—two grains daily, without noticeable diminution of headache or change in disposition; then therapy was continued until March first. Patient's sister was urged to have patient persist in following directions and asked to report in two weeks that therapy might be changed were no relief obtained. It was my intention to replace the Thyroid-Ovarian feeding by whole pituitary.

When patient nor her sister reported at the appointed date the sister was called and said that she had not reported because the patient's headache was entirely relieved. A normal menstruation had occurred. Patient was showing lively interest in surroundings and more clearly normal in disposition than at any time since first menstruation.

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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### EDITORIAL

## OF VITAL IMPORTANCE TO EVERY MEMBER OF OUR STATE MED- ICAL ASSOCIATION

I am sure that you have an interest in and feel a high degree of pride for the average standing of the Medical profession of the State of Oklahoma. You are desirous that our membership shall keep in vital touch with all new discoveries of our science and to participate in the benefits to which we may be justly entitled from National organization. You are aware that our State Medical Association is a unit of the A. M. A. and should lend its full cooperation in all the commendable undertakings as well as share in the honorary or other prof-

its of this organization.

Most of the good work accomplished by the American Medical Association originates in and is outlined by its legislative body known as The House of Delegates of the American Medical Association which meets at the same time and place as the Scientific Sections.

The function of the House of Delegates is far more than the election of its officers. This body provides for the publication of the Journal of the American Medical Association and four other Journals representing special branches of medicine. It encourages the publication in newspapers and magazines, various articles which pertain to public health. It provides for numerous departments, the best known perhaps is the Department of Propaganda for Reform. This department carries on a continuous investigation and exposure of fraud in the manufacture and sale of medicines or in advertised methods of treatment. It also supports a department which seeks to aid the various States in the requirements of higher standards of education and better medical legislation. The many other functions of the A. M. A. which are provided for by the work and wisdom of its House of Delegates are too numerous to here mention.

The House of Delegates is composed of one or more representatives elected from the various States and Provinces constituting the United States of America.

The peculiar and special qualifications which these State Delegates should possess to be of best service to their own State and to the profession at large scarcely permits of any discussion. Many of our best qualified physicians in the science of medicine might on account of a natural timidity, lack of initiative or legal ability render a most inefficient service in such a position.

Were you aware that our Oklahoma State Medical Association together with about ten other States are the only ones remaining which still follow a sentimental or other custom in the election of their Delegates?

Ours has been to elect the retiring President each year as one of our Delegates to the A. M. A. His term of office begins immediately. Within a few weeks he steps into the House of Delegates of the A. M. A. a new and most times inexperienced man to assist in the transacting of business and legislation which to physicians is second only in importance to that transacted by our United States House of Representatives.

If he is not too much embarrassed or discouraged by his attendance upon the first session he may attend other sessions and perhaps vote intelligently. He may attend all sessions of the House during his second year of service though all the time conscious that this is his last and that he is to be likewise succeeded by the retiring President the ensuing year. Did you know that thirty-seven other States elect one or more of the same delegates year after year? Some have been serving in this capacity for fifteen or eighteen successive years. The natural sequence of such an assemblage composed of a small group of new, inexperienced men with that of a much larger group of experienced and well qualified representatives acquainted with each other is perfectly obvious.

Doctor, shall we continue to be indifferent about so important a matter or shall we begin at our next meeting at Tulsa by electing our retiring President, if he be qualified, or some other qualified man for this office and give him to understand that he is to serve so long as he may do good service for our State and the profession at large?

Let me here disabuse your minds of any thought that this letter is pregnant of a selfish motive. First, I do not want such an honor. Second, should I desire such office I shall be ineligible this year for I am already an Alternate Delegate from one of the Sections of the A. M. A. and have been notified that I should probably be called on to serve in place of the regular delegate. Let me assure you that I have no other motive than that which actuates any physician who is loyal to his profession and who desires that his own State shall do her full share of service in our National organization as well as to see that credits and honor shall also come to those who have justly earned them.

Would like to have your opinion about this matter. And if you agree with me I trust that you will discuss the matter with your delegates to the State meeting at Tulsa in May.

Fraternally yours,

Everett S. Lain.

### *Editorial Notes—Personal and General*

#### **"BARBER, BAKER AND CANDLESTICK-MAKER."**

"The Chiropractors have at last succeeded in establishing their own board of examiners. Possibly this was because enough people were found who believed it was a case of give 'em a chance. It will help some. Our young men don't like to work on farms. In about four months they can now become certified chiropractors and monkey with the spines of their fellow men. It takes about 15 years to make an ordinary doctor, and about as many more to make the kind you are satisfied to consult. But the chiropractors advertise freely. This is good for newspapers. Why worry? Our advertising columns are for sale. Our spine we can keep to ourselves."

—Sausalite (California) News.

Hughes County Medical Society was reorganized March 14 when a meeting for the purpose was held at Holdenville. Officers elected are President, L. M. Lett, Dustin; vice-president, W. B. Bentley, Stuart; secretary, G. Y. McCary, Holdenville.

Dr. M. A. Kelso, Enid, who has been seriously ill at Brownsville, Texas, for several months, has been moved to his home in Enid.

Dr. C. L. Rogers, Alva, has located at Gate.

Logan County Medical Society held a symposium on influenza at their Guthrie meeting, March 20. Each doctor being assigned a subject to discuss by the program committee, Dr. West "Liver and Gall Bladder"; Dr. Houseworth, "Hearth"; Dr. Miller, "Treatment"; Dr. Barker, "Eye, Ear, Nose and Throat"; Dr. Petty, "Lungs"; Dr. Larkin, "Laboratory Findings"; Dr. Ritzhaupt, "Intestinal Tract"; and Dr. Gray, "Summing Up of All Conditions."

Dr. J. P. Sudderth, Nowata, received painful injuries March 20, when a machine he was driving collided with a car standing on railway. No fractures occurred, but very painful injuries were inflicted.

"COMBINATHIC" is a new science fostered and championed by that ever present Knight of the cults, George Washington Cornell, regardless of the frivolity of their claims. This time "Combinathic" forges to the front, crying for exemption from any sort of medical practice act regulation. It will be remembered that only a few months ago this same champion was active before the legislature at Oklahoma City on behalf of the Chiropractors. We care not who they "Combinath" upon, so long as they are qualified a few notches above the ability to wash dishes and sweep floors. Someone of intelligence should be empowered to test such qualifications. After that, may the good Lord help the ignorant and helpless.

Dr. C. L. Hill, Haskell, has located in Sand Springs.

Drs. J. M. Alford and W. J. Wallace, Oklahoma City, were recently initiated into the Phi Beta Pi, the professional medical fraternity of Oklahoma University.

**McIntosh County Medical Society**, meeting at Checotah, March 6 and heard papers by Dr. Floyd E. Watterfield, Muskogee, on "Bladder Conditions with X-Ray Findings," and A. W. Harris, Muskogee, on "Conservative Surgery."

Two hundred thousand dollars proposed for a medical building at Oklahoma City for the medical department, and which seemed sure of passage, "went on the rocks of discord" and did not become a law. It is said the defeat of the proposal came about over the attempt to divide the sum into two parts, a \$75,000 building to be located at Norman, the remainder to go into a building at Oklahoma City. "United We Stand," sometimes.

**Muskogee County Society** met March 26. Dr. John Reynolds reported a clinical case, which was generally discussed. Dr. F. J. Wilkiemyer reported a case which upon autopsy showed an immense gall-bladder, found with great difficulty, containing a large number of stones, the organ being situated over the anterior of right kidney. Dr. C. W. Heitzman read a paper on Diseases of the Liver, advocating duodenal tubal draining and lavage. A committee composed of Drs. F. J. Wilkiemyer, F. W. Ewing and C. A. Thompson were appointed to arrange for a banquet April 9 to celebrate Pasteur's centenary. Dr. LeRoy Long, Oklahoma City, accepted invitation to address the society on that date.

Dr. R. M. Howard, Oklahoma City, sends the JOURNAL a remembrance from Rio De Janeiro, where he is attending the Brazilian Expedition.

Drs. J. W. Nieweg and J. D. Pate, of Duncan, have formed a partnership.

Dr. H. Coulter Todd, Oklahoma City, was slightly injured in an automobile collision in March.

Medical students of Norman, with their fellows staged a tremendous protest aimed at the merchants of that city, who they claim influenced the defeat of the appropriation for a Medical building at Oklahoma City. The defeat was brought about, it is said, by an attempt of a legislator from Norman to divide the appropriation into two buildings, one in Norman and one in Oklahoma City. The result is the students regardless as to whether they are medical students or not, are threatening a boycott against Norman merchants.

Dr. Fred Y. Cronk, General Chairman, announces the following Committees for the Annual meeting, to be held in Tulsa, May 15-16-17:

#### ENTERTAINMENT:

Dr. Arthur V. Emerson, Chairman.  
Dr. W. W. Beesley.  
Dr. S. D. Hawley.  
Dr. Fred S. Clinton.

#### FINANCE:

Dr. Horace T. Price, Chairman.  
Dr. W. Albert Cook.  
Dr. G. A. Wall.

#### BADGES (AND WIND SHIELD STICKERS)

Dr. A. Ray Wiley, Chairman.  
Dr. J. C. Brogden.  
Dr. Charles H. Haralson.  
Dr. D. O. Smith.

#### MEETING PLACES:

Dr. Roy W. Dunlap, Chairman.  
Dr. W. M. Mayginnis.  
Dr. Ralph V. Smith.

#### HOTELS:

Dr. A. W. Pigford, Chairman.  
Dr. Charles H. Ball.  
Dr. C. T. Hendershot.  
Dr. H. D. Murdock.  
Dr. A. W. Roth.

#### HOSPITAL CLINICS:

Tuesday: Dr. G. H. Butler, Chr., Dr. R. Q. Atchley.

Wednesday: Dr. Fred S. Clinton, Chr., Dr. L. H. Carleton.

#### RECEPTION:

Dr. T. W. Stallings.  
Dr. Walter L. Anders.  
Dr. J. C. Braswell.  
Dr. Henry S. Browne.  
Dr. Herbert W. Callahan.  
Dr. James M. Cannon.  
Dr. Nevin J. Dieffenbach.  
Dr. J. S. Hooper.  
Dr. C. C. Hoke.  
Dr. Charles D. Johnson.  
Dr. C. J. Woods.  
Dr. R. N. Smith.

#### DOCTOR WILLIAM BUFORD PIGG

Dr. W. B. Pigg, Okmulgee, for many years an active practitioner, residing at McAlester and later at Henryetta and Okmulgee, died at the home of his brother in Richmond, Kentucky, March 7. He is survived by a daughter and his death is genuinely regretted by a large circle of friends.

Dr. Pigg was always more than passively active in everything pertaining to the practice of medicine. In the Indian Territory days he was a regular, enthusiastic attendant at all meetings, took an active part in the scientific work and was a student of medicine and its allied problems at all times. In the early nineties, he visited Europe, studying principally in Paris, at the numerous clinics, which then offered probably the best there was in the science of medicine. He was a past secretary and president of the Okmulgee Society and formerly held many offices in the Indian Territory Medical Association. Born in Irvine, Kentucky, May 19, 1860, his preliminary education was obtained at Central University, after which he graduated from the Kentucky School of Medicine June, 1882. He located successively in Kentucky, Florida and Colorado, coming to Indian Territory, where he practiced at McAlester from 1894 to 1907; Shawnee, 1907 to 1912; McAlester 1912-1915; Henryetta 1915 to 1918, after which he located in Okmulgee. Dr. Pigg may well be denominated the "stormy petrel" of Indian Territory medicine. His very frank characterization of things as he viewed them, often were misinterpreted by the over sensitive, but his friends always knew there was little or no animus in his make up. Scores of them sincerely regret his passing to the Great Beyond.

### THE 1923 CONVENTION CITY

Tulsa Will Be the Mecca of the Oklahoma State Medical Association May 15, 16 and 17.

DR. HORACE T. PRICE,  
Sec'y. Tulsa County Medical Ass'n.

The success of a convention depends to a large extent on the atmosphere of the Convention City and particularly on the convention host. Dr. Roy W. Dunlap, president of the Tulsa County Medical Society, has appointed Dr. Fred Y. Cronk general chairman of the Convention Committee and every detail necessary for a successful convention has been completed. Reg-

To those who have never been in Tulsa a general outline of what the city is and has will be of interest.

In the year of 1922 the city of Tulsa, with the warm blood of life throbbing in her veins, felt the continued surge of progress of other years and, carried in the swiftest of mid-current, measured by school census, grew no less than twenty-five per cent. Such a growth indicates a great building program.

The reader will probably be surprised to learn that Tulsa's building program for the year 1922 was considerably greater than the combined permits of the other three



All Sessions of the Oklahoma State Medical Association will be held in the  
Municipal Auditorium, Fourth & Cincinnati.

istration, the exhibits, and some of the meetings of various sections will be in the new Board of Education Building, 412 South Cincinnati Avenue, and the general sessions will be called in the Auditorium of the adjoining Municipal Building, corner of Fourth Street and Cincinnati Avenue. This provides meeting rooms in the heart of the business district.

Tulsa is always an interesting convention city because it changes so rapidly. Each year there are so many additions to the skyline that at least one visit per year is essential to keep in touch with even the principal features of the city. To those who occasionally come to Tulsa there is always a wonderment in noticing the enormous strides made yearly in the office buildings.

leading cities of the state. Accurately speaking, Tulsa spent over \$13,500,000 for building in 1922. The sky line leads a visitor to believe he is in a city of many times the population of Tulsa. This is the result of business men's confidence in local realty values. This belief is well placed, for at no time in the history of the city have values declined. For twenty odd years the realty in this city has steadily increased in value so that certain lots outside of the immediate business district, which sold for \$50.00 in 1900, are today valued at \$70,000. Probably no other city in the United States can boast of such a phenomenal rise in the same length of time. The building program bids fair to maintain its high rate, for in January of the present year over a million

dollars in building permits were issued.

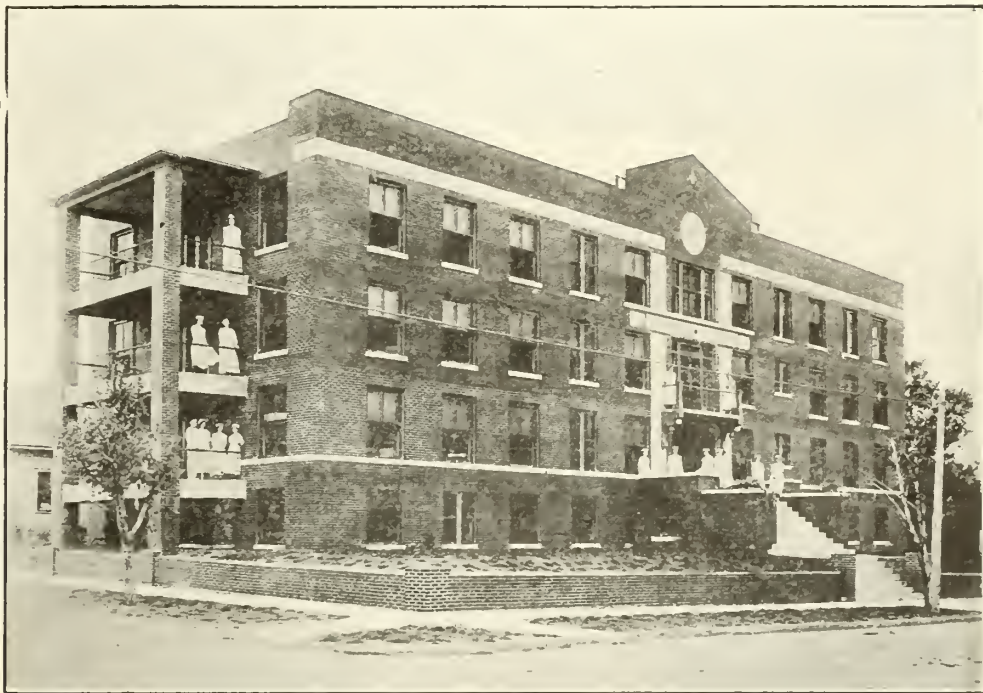
In connection with the building program it is of interest to note that Tulsa, through its City Plan Commission, is taking the lead among the cities of Oklahoma in passing various measures in the state legislature. These measures will do much for the cities of the state in health, safety, and beauty. The present plans for Tulsa anticipate a city of 300,000 people in the next twenty years, and it is for the use of such a population the city is now being molded.

To one who has never visited Tulsa there is a pleasant surprise. Starting back in 1900 with a population of little over 1300, grew-

it to be. Therefore, when you visit Tulsa do not look upon this city as the result of oil, preferably, as the result of men of vision. They saw in Tulsa the oil capital of the world and had the force and grit necessary to create their vision in brick and steel.

Tulsa office buildings are noted for their architectural beauty as well as number and size. Wonder grows that all of these great office structures are tenanted. The surprise is even greater when it is learned that these buildings were entirely rented before completion.

Proud as the citizens are of Tulsa's won-



Oklahoma Hospital, West Ninth & Jackson Streets.

ing by leaps and bounds, maintaining a tremendous percentage of increase since those former years, Tulsa today numbers well over 100,000 people within its city limits. Using school statistics as a basis of estimate, this city is now Oklahoma's greatest.

The query soon arises—"What made Tulsa great?" Without thinking, we are apt to immediately answer—"Oil." But oil did not make Tulsa great. The real force in this city's greatness was and is the band of valiant, loyal, clear thinking business men who sacrificed time, money, and a life of ease to fight Tulsa's battles. Tulsa was not particularly favored by the goddess of oil—not more so than many other nearby cities of larger size at the time. It was a vision of what Tulsa could be that caused

derful business district, even greater pride is felt when the residential districts are inspected. Beautiful, expensive homes are found everywhere. The man who makes money in Tulsa is the man who calls Tulsa "Home".

Parks are found in all neighborhoods. These places of natural beauty are fully equipped with playground apparatus and supervised play is regularly conducted. Wading pools are found in many of the parks and these miniature "swimming holes" are under the supervision of nurses.

Thirty-five beautiful churches, well attended, mark Tulsa as a city of God fearing people. Several new churches are under construction at present and others will begin work in the near future. The city's



**Tulsa's New Central High School Building.**

churches are well distributed and all denominations are represented.

Realizing that a well drained city is a healthful city, Tulsa is now expending nearly a million dollars to drain over 2,000 acres of its land. This gigantic storm water sub-

way is being built of concrete two feet in thickness. The outfall is 22 feet in width, more than wide enough for two automobiles to drive through. However, this drainage undertaking, the greatest of its kind in the Southwest, fades into insignificance when



**The Convention will be held in the building in the left foreground.**

compared with the great Spavinaw water project, which is soon to furnish Tulsa with an enormous quantity of pure, sparkling, mountain water daily. This is the second largest public engineering undertaking in this country and will cost by the time of its completion in the neighborhood of \$7,000,000.00. Sixty miles from Tulsa a mountain stream is being dammed to impound water to be conveyed through an enormous pipe line 60 inches in diameter. Besides dam-

the city in a short time no matter what the weather. These good roads mean much towards attendance and enthusiasm at association meetings. Regular meetings are held in the auditorium in the Municipal Building. This meeting place is furnished without charge by the city.

It is of interest to the people of Tulsa to know that the president of the Oklahoma State Medical Association for the ensuing year is to be Dr. Ralph V. Smith of their city.



The Atlas, Cosden & Kennedy Buildings  
on Boston Avenue.

ming the stream, other phases of interest are—the removal of the entire town of Spavinaw; clearing 1750 acres of land to be covered with back-water from the dam; burrowing a tunnel 7,500 feet in length under a rocky hill; and the Mohawk Reservoir. The Spavinaw park will be in the form of a summer colony. As this great water system will provide more water than Tulsa will need for several years, the surplus will be used to supply neighboring towns along the line, thus proving a source of revenue to the Water Department of the City of Tulsa.

The Tulsa Medical Association, the host of the 1923 convention, numbers 150 members at the present time. Because of the 100 miles of concrete roads leading into Tulsa, members living in the rural districts and surrounding towns are enabled to reach

## THE KANSAS CITY CLINICAL SOCIETY

The Kansas City Clinical Society has been organized among the clinicians of Greater Kansas City for the purpose of encouraging, developing, organizing and presenting the educational advantages of the clinical material in Greater Kansas City to the profession of the Southwest. An announcement of their efforts will be found upon another page in this issue.

The Kansas City Clinical Society has two distinct features in its program. First, they are going to publish a daily list of the clinics at the various hospitals in Kansas City, so that visiting physicians can secure this list the evening before, or early in the morning of the same day and make their choice of the clinics or laboratories that they would like to visit. Similar listings have been in operation in Chicago, New York, Philadelphia and St. Louis for some years.

The second part of their program consists of a well organized fall clinic which will be held at Convention Hall in Kansas City, Missouri, from October 15th to 20th, 1923. The Society has invited a number of eminent clinicians of international reputation who will present some aspects of their specialties before the guests at Convention Hall. It is anticipated that there will be at least 1500 to 2000 physicians in attendance at these fall clinics. Kansas City is making wonderful efforts to provide for their entertainment during the time that they are enjoying this brief period of intensive post-graduate study. The program is being organized so that every specialty will be represented, particularly with regard to the attitude of the specialist toward the general practitioner. The general practitioner is constantly requiring further enlightenment upon the progress of the various specialties, and at the same time the specialist requires a broadening

of his viewpoint to take in the influence of the other specialties upon the progress of medicine.

The idea of this fall clinic is to bring medical gospel to the general practitioner and general medicine to the specialist.

It is suggested that our readers watch the space which has been retained in our Journal for the monthly announcements of the Kansas City Clinical Society.

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*Abstracts, Observations from Current Medical Literature*

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#### BLOOD TRANSFUSION BY THE CITRATE METHOD IN HEMORRHAGES OF THE NEW-BORN

Frederick H. Falls, Iowa City (Journal A. M. A., March 10, 1923), makes a report on the intravenous injection of citrated blood, using the external jugular vein for that purpose. The method pursued and the instruments used are described in detail. There were fourteen cases in the series. The seriousness of the hemorrhage varied from a slight capillary oozing from a mucous membrane to a severe anemia which resulted from extensive bleeding from the cord, or from a melena. In many of the cases, various remedies had been tried before transfusion was undertaken, such as retying and sewing the umbilicus in cord hemorrhages, or the giving of various other forms of coagulant, such as blood coagulants, horse serum, or human serum under the skin. These measures had failed to produce the desired effect, and so transfusion was resorted to. The operation was followed by recovery in all cases, but in a few it was necessary to repeat the transfusion.

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#### CHRONIC INFECTIOUS ARTHRITIS

About 100 cases are analyzed by Ralph A. Kinsella, St. Louis (Journal A. M. A., March 10, 1923). Twenty-four cases were chronic cases of arthritis which began as acute rheumatic fever. In nearly all instances the chronicity was dependent on neglect or inadequate treatment. All cases responded readily to salicylates, and the patients left the hospital "recovered," as far as arthritis was concerned. There were three cases of gout, two cases of syphilitic arthritis, twenty-three cases of arthritis deformans, thirty-five cases of chronic infectious arthritis, in which there was com-

plaint of chronic rheumatism involving one or several of the larger joints, and in all of which the inflammatory character of the arthritis and the roentgen-rays changes spoke for bacterial invasion, even though this invasion could not be demonstrated. The most significant features of this study have been: (1) The emphasis given to the part which circulatory changes and consequent nutritional changes play in the production of painful stiffening of the joints in which simple atrophy is the only evidence on roentgen-ray examination. (2) the importance of exhaustive physical examination in the search for infected foci. (3) The necessity of employing many forms of treatment, since no form was constantly successful and each kind of treatment was occasionally successful. (4) The importance of the last described group of male patients whose chief symptoms is backache and who have spinal osteoarthritis, apparently associated with prostatic infection. (5) The lack of evidence that arthritis deformans is a focal infection.

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#### AFTER-CARE OF INFANTILE PARALYSIS CASES OF THE 1916 EPIDEMIC IN BROOKLYN.

Horace G. Dunham, Brooklyn (Journal A. M. A., Jan. 27, 1923), urges that, during an epidemic of infantile paralysis of any size, children with obscure indisposition should be kept at rest in bed for several days until the exact nature of their condition can be determined. When paralysis supervenes, it usually appears within a very short time after the initial upset, the average in a series which was investigated being three days after the first manifestation of illness; but often the paralysis comes on twenty-four or forty-eight hours after, so that the patient with a malaise of no consequence need not be incapacitated over a long period of expectancy. Early, neglected patients should never be ignored in treatment later, regardless of the degree of involvement. It is essentially a disease of childhood, therefore in every obscure, acute illness the diagnosis of infantile paralysis should always be a mental reservation, since sporadic cases occur in the community every year. Obviously, to obtain the best results and maximum functional return, these patients must have intelligent care from the outset of their illness. Correct treatment for a definite stage applied at the wrong time is far worse than none, just as surely as exercise pushed to the point of fatigue and muscle exhaustion is distinctly harmful.

## CHARACTERIZATION OF VARIOUS FORMS OF ENDOCARDITIS

The bacterial and the indeterminate groups of cases of endocarditis are discussed by Emanuel Libman, New York (Journal A. M. A., March 24, 1923). The indeterminate group consists essentially of two types of cases: (1) an atypical form of verrucous endocarditis, and (2) those cases usually described as terminal. By the atypical variety is meant the form of endocarditis in which the Aschoff body is said to be the characteristic lesion of the disease, the case being of rheumatic origin. Of cases clinically recognized as rheumatic fever and exhibiting at postmortem examination the typical verrucous lesions, only eighteen out of fifty-six exhibited Aschoff bodies. The clinical histories of the other thirty-eight cases made it clear that many of them at least were cases of true rheumatic fever. It is evident, therefore, that not all cases of rheumatic fever are accompanied by the specific lesion. Besides those cases that present the clinical picture of rheumatic fever and the typical verrucae on the valves, but not Aschoff bodies, there exists a group of cases presenting more or less the clinical picture of rheumatic fever (with perhaps a greater tendency to the occurrence of purpura and erythema), not showing Aschoff bodies at the postmortem examination, and accompanied by lesions on the valves which do not correspond to those usually found in rheumatic fever. Bacteria have thus far not been found in the vegetations of this group. It is possible that some of them represent unusual types of vegetation of rheumatic origin. In fatal proved cases of rheumatic fever studied by Libman, the tricuspid valve was involved in twelve of eighteen cases, or more than 66 per cent. Of fifty-six cases classed clinically as rheumatic and showing typical vegetations at the postmortem examination, but without Aschoff bodies, thirty-one were accompanied by vegetations on the tricuspid valves. In cases of acute bacterial endocarditis, the right side of the heart (tricuspid or pulmonary valves, or both) was found involved in fifteen out of fifty-six cases, or 26.8 per cent. The mitral valve was affected more often than the aortic, the same holding true of cases of subacute bacterial endocarditis. In cases of the latter disease, the right side of the heart was involved once (tricuspid) in more than 100 hearts, and the lesion was slight. The atypical cases involve the right side of the heart frequently, in one instance the pul-

monary valve being affected. This valve was not found affected in any definitely proved case of rheumatic fever. Terminal endocarditis appears to be a disease of the left side of the heart, the mitral valve being the usual seat of the disease. Other clinical phases of endocarditis are considered by Libman, and in closing he says that it is evident that the disease which was considered rare, subacute bacterial endocarditis, is now recognized as one of the common diseases. It was supposed to be a practically uniformly fatal disease. Now more and more often partial or complete recoveries are noted. Very mild cases exist, and there is a recurrent form of the disease. In other words, the interest is shifted toward the question of healing. It will be of the greatest value if an active campaign is undertaken for the purpose of preventing this as well as other forms of endocarditis.

## RELATIVE VALUE OF SURGERY AND ROENTGEN RAY IN THE TREATMENT OF HYPERTHYROIDISM

Edward P. Richardson, Boston (Journal A. M. A., March 24, 1923), states that a comparison of the cases treated by roentgen ray and those treated by thyroidectomy shows that the average results in all cases treated by subtotal thyroidectomy are better than the results in a selected two thirds of the cases treated by roentgen ray. The metabolism shows a drop to about a positive 10, as compared with a positive 20 for the roentgen-ray cases; the pulse, a drop to 80, as compared with 90; the weight, a tendency to more persistent and greater increase. The rate of fall in metabolism and pulse is about equal. The reason for this is that in certain of the patients who underwent ligation of both superior thyroid arteries, followed by thyroidectomy in two stages, the whole of the surgical treatment required four months, and in one case eight months for completion. In nine cases treated by immediate subtotal thyroidectomy in one stage the sharp fall in metabolism and pulse and gain in weight are striking. Richardson says there can be no doubt that the average results in surgery are better than those following roentgen-ray treatment. The roentgen ray has a beneficial effect in certain cases of hyper-

thyroidism, but this effect is not sufficiently constant to be relied on as the sole form of treatment. In selected cases of exophthalmic goiter, the use of roentgen-ray treatment under careful control is justifiable for a period of four months, during which the patient receives about five treatments. If, after four months of treatment, the degree of improvement obtained in general condition and basal metabolic rate does not promise "cure," operation should be undertaken.

#### PREVENTION OF PERITONEAL CONTAMINATION IN DRAINAGE OF ABDOMINAL ABSCESES

Two methods of safe drainage of deep seated intra-abdominal abscesses are presented by Joseph Rilus Eastman, Indianapolis (Journal A. M. A., March 24, 1923). One plan is that of approaching a laterocolic or retrocolic abscess by an entirely extraperitoneal route; that is, the incision is made lateral to the classical appendix incision, and extends only to the peritoneum. The parietal peritoneum is then peeled away from the musculature of the flank, and the abscess opened bluntly at the bottom of the extraperitoneal canal thus formed. The plan is described as follows: About fifteen years ago, in attempting to reach a retrocecal abscess as described above, it was found easily possible to peel off the peritoneum down to a position alongside the cecum; but the exploring finger found no ulcerated area through which a puncture could be made without danger of admitting virulent pus into the free peritoneal cavity. Therefore, the space alongside the cecum was loosely packed with two strands of gauze, between which a large rubber drainage tube was passed, the ends of the gauze and the drainage tube protruding at the wound in the flank. About eight hours after the operation, the abscess broke spontaneously, and a large amount of pus was discharged from the wound. The gauze was removed gradually, and the tube was taken out after ten days. There were no subsequent signs or symptoms of abscess, nor

has there been any recurrence of appendicitis symptoms nor any intra-abdominal trouble of any kind in the years that have lapsed since the operation. Eastman says he has often dealt in this manner with abscesses consequent to appendicitis, and he has been surprised to note how completely this plan of utilizing suction and chemotaxis has removed every vestige of infection in and about the appendix, and how free patients thus operated on have remained, so far as any postoperative complications are concerned.

#### SOME RECENT ADVANCES IN THE TREATMENT OF HEART DISEASE

Maurice Lewison, Chicago (Journal A. M. A., March 24, 1923), discusses six forms of cardiac arrhythmia: (1) sinus arrhythmia; (2) heart block; (3) premature contractions; (4) paroxysmal tachycardia; (5) auricular flutter, and (6) auricular fibrillation. He also discusses the treatment of cardiac diseases as influenced by the presence of one or more of these conditions and refers to the treatment of functional disturbances of the heart, including effort syndrome. The newer knowledge of the mechanisms of the cardiac rhythm, particularly as disclosed by researches with the electrocardiograph and polygraph, is said to enable physicians to treat heart conditions more efficiently. Cardiac failure is usually associated with auricular fibrillation, which, when present, responds very satisfactorily to digitalis medication. Proper dosage of digitalis is necessary. The method of large dosage is advocated. Quinidin has proved successful in more than 50 per cent. of the cases of auricular fibrillation in restoring the normal rhythm. The importance of infection as a factor in cardiac failure is said to be too frequently overlooked, and the generally accepted theory of back pressure and cardiac strain, Lewison asserts, should be abandoned in most cases. Functional cardiac disturbances must be differentiated from serious organic disease, and treated accordingly. Effort syndrome is usually not a cardiac disease, and the true diagnosis should be determined for its successful treatment.

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Meeting Place, Tulsa, May 15-16-17, 1923.

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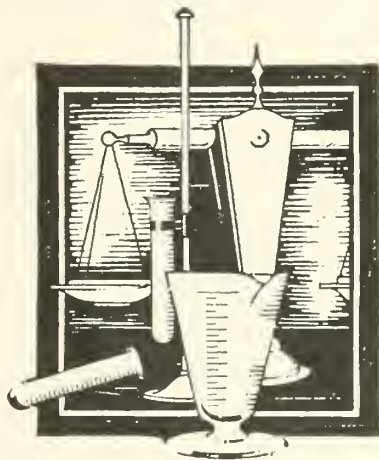
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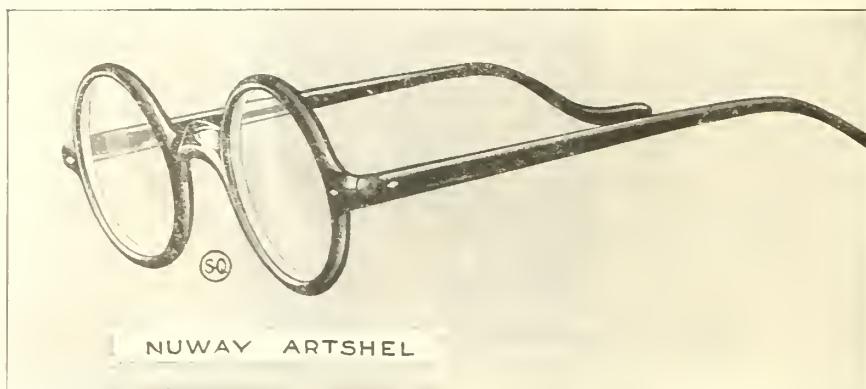
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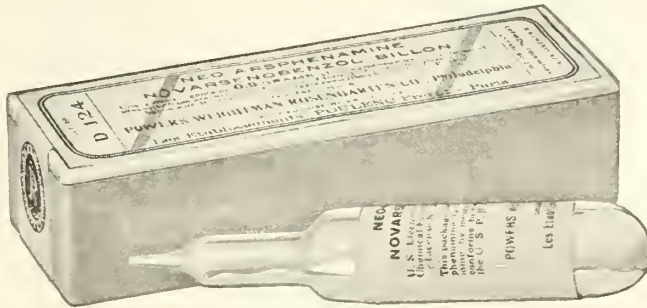
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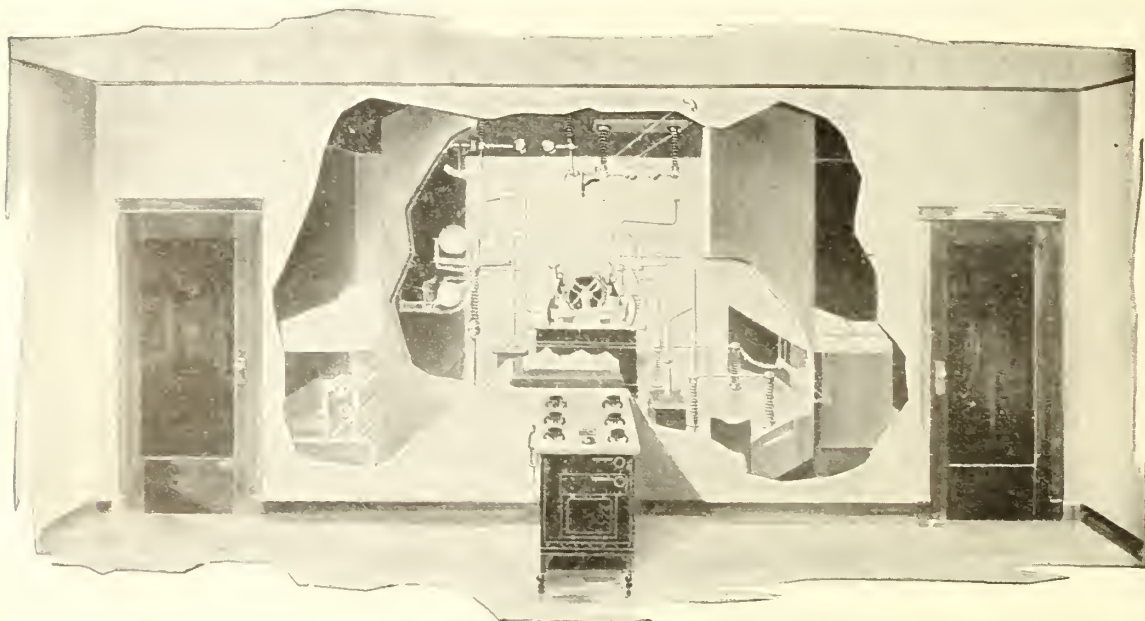
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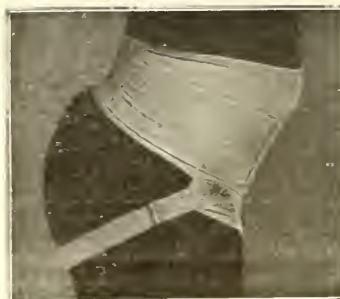
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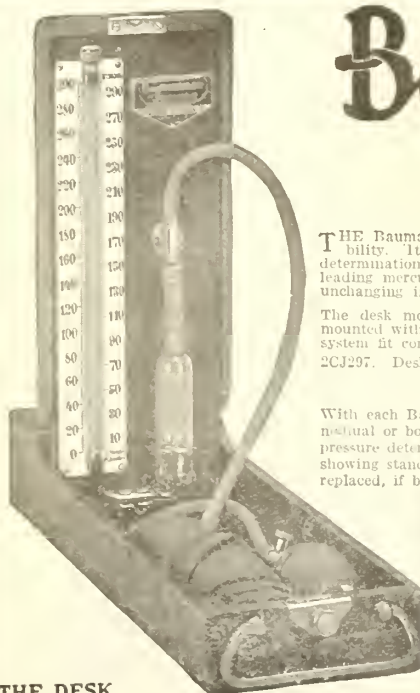
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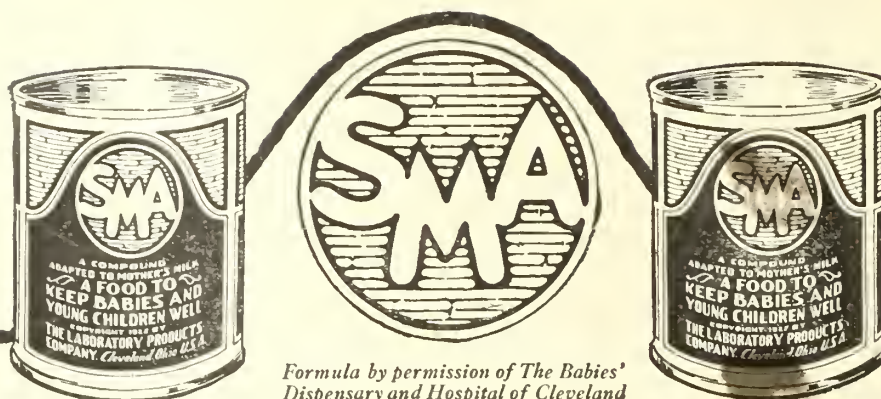
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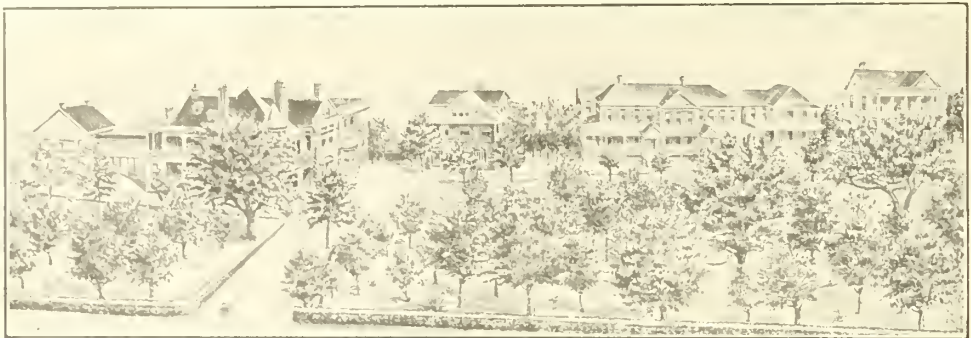
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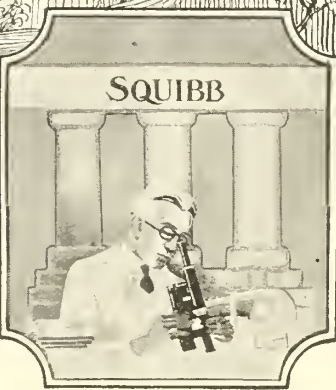
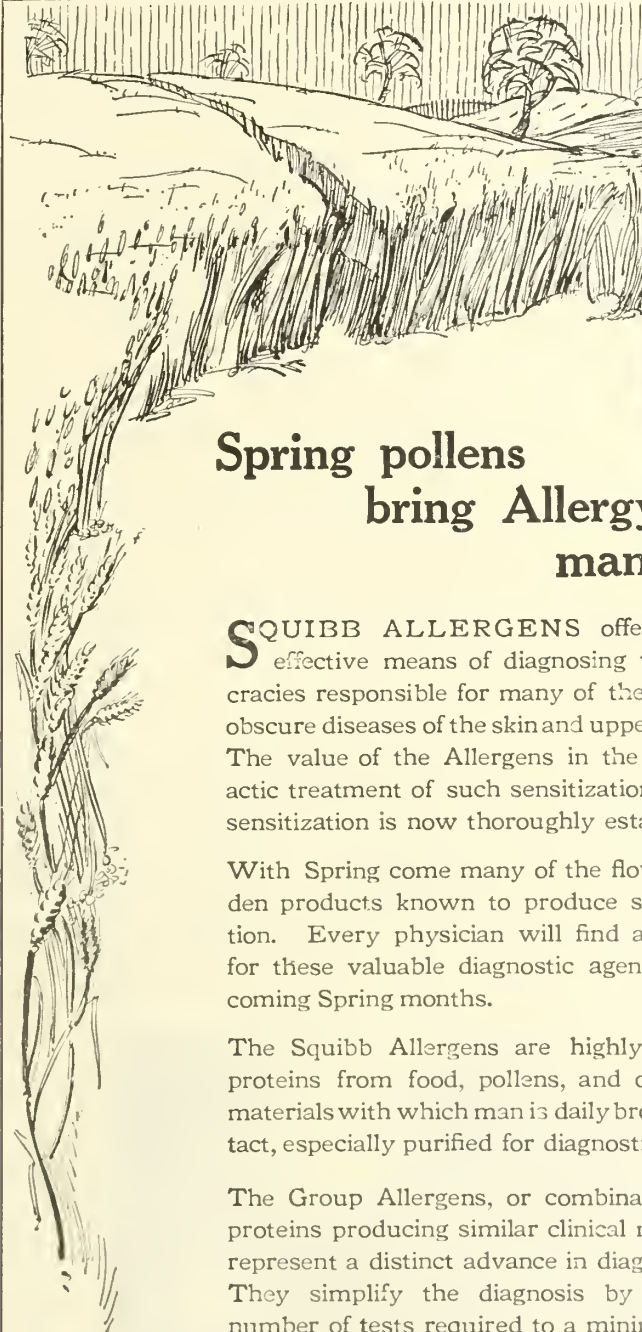
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OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., MAY, 1923

NUMBER 5

### A STUDY OF RECORDS WITH SPECIAL REFERENCE TO CAUSE OF DEATH

L. J. MOORMAN, M. D.,  
Oklahoma City, Okla.

In 1920 St. Anthony's Hospital admitted 2866 patients. There were 182 births making a total of 3084. Of this number 1954 were surgical, and 1094 medical, including the 182 new born babies. There were 73 deaths, 30 surgical and 43 medical. There were 20 autopsies, 6 surgical and 14 medical. There was an attempt to state the immediate or specific cause of death in 30 cases. No attempt to state the cause of death in 33 cases. The disease or condition from which the patient suffered was named as the cause of death in 10 cases.

The final diagnosis agreed with the provisional diagnosis in 60 out of 73 cases, leaving 13 in which the diagnosis was changed. In the majority of these cases the change in the diagnosis was made necessary on account of knowledge gained by surgical or laboratory procedure, or by autopsy. The final diagnosis was as follows:

Broncho-pneumonia	4
Lobar pneumonia	5
Cancer of stomach	2
Cancer of the rectum	2
Cancer of liver and pancreas	1
Cancer of lymph nodes	1
Cancer of esophagus	1
Cancer of the breast	1
Adeno carcinoma of abdomen	1
Sarcoma	1
Purulent meningitis	5
Tuberculous meningitis	1
Peritonitis—acute general (due to appendix)	5
Peritonitis—acute general (due to abortion)	1
Peritonitis—gun shot	1
Peritonitis due to typhoid fever	1
Peritonitis due to carcinoma of stomach	1
Acute appendicitis—death from second operation due to abscess	1
Gangrenous appendix	1

Exophthalmic goiter	3
Typhoid fever	3
Aortic aneurism	2
Rheumatic endocarditis	1
Chronic nephritis	2
Pulmonary tuberculosis (2 had extensive complications)	4
Illioocolitis	1
Acute colitis	1
Pyo-pneumothorax (spontaneous)	1
Right pneumothorax (traumatic)	1
Fractured skull	1
Concussion of brain and fractured femur	1
Shock from injury (runaway)	1
Gunshot of chest	1
Gunshot of abdomen	1
Pernicious anemia	2
Syphilis of liver and central nervous system	1
Stricture of esophagus (lye)	1
Hemorrhagic disease of childhood	1
Uremia	1
Salpingitis and uterine papiloma	1
Chronic salpingitis	1
Pyosalpinx	1
Infected cystic tumor of femur	1
Cleft palate	1
No diagnosis (notes show convulsions)	1

Your attention is called to the fact that approximately two thirds of all cases admitted to the hospital were surgical, and nearly two thirds of the deaths were medical. This may be accounted for, first; Because the hospital is still a place of last resort for many medical cases as shown by the fact that twelve of the deaths on medical service (28 per cent.) occurred in less than 24 hours after admission, and five of the deaths (12 per cent.) occurred in less than 48 hours after admission. Second: Because some of the cases (13 per cent.) were of the type usually considered surgical but at the time inoperable, as peritonitis and brain abscess. Third: Three cases had been operated shortly before entering the hospital, one for mastoid, dying on medical service of meningitis! One for appendicitis, dying of typhoid fever. One exploratory of abdomen in case of advanced pulmonary

tuberculosis with tuberculous peritonitis and enteritis. Fourth: Two died immediately upon entering the hospital as a result of trauma. Fifth: There are always a certain number of medical cases in which death is inevitable.

A mortality rate of approximately 1 1-2 per cent. in the surgical cases constitutes a glowing tribute to members of the surgical staff, especially in view of the fact that there has been no concerted effort to make statistics at expense of the patient, but rather a skilful, courageous, equable wielding of the scalpel with the purpose of giving to every surgical case the best that surgery can give, which means that the patient's welfare is the first consideration.

In reviewing some of the cases it is interesting to note that peritonitis represents over 13 1-2 per cent. of the total number of cases. Of this number five were diagnosed acute general peritonitis due to appendix; one acute general peritonitis due to abortion and possibly perforation of uterus; one due to gun shot; perforating intestines; one abdominal abscess due to acute suppurative appendix; one secondary to carcinoma of stomach, and one due to typhoid fever.

Next in frequency to peritonitis we may place both pneumonia and carcinoma, as they, together, represent over one fourth of all cases, each showing an incidence of 12 per cent. In addition to cases reported under the head of diagnosis, as pneumonia, there were four cases in which pneumonia was reported as a terminal infection. In addition to the 12 per cent. diagnosed as carcinoma, there were three cases with clinical diagnosis of carcinoma of the stomach, two of these were operated and reported by the laboratory as subacute gastritis. One died of peritonitis and the laboratory report was proliferation of connective tissue about the pylorus, which had resulted in pyloric obstruction.

There were six cases of meningitis, three of which were due to the pneumococcus. Two were due to extension from suppurative sinucitis and brain abscess respectively, (the bacteriology not given), one was tuberculous. In spite of the fact the hospital is not supposed to take pulmonary tuberculosis, there were four deaths from this cause.

The following is a summary of the thirty cases in which there was an attempt to state the immediate cause of death. It

might be only fair to say that in many instances the notation on the records seems to represent the opinion of the intern and not that of the attending physician or surgeon.

Toxemia	8
Acute dilatation of the heart	3
Cardiac failure	2
Myocardial weakness	1
Surgical shock	3
Broncho-pneumonia (terminal)	2
Exhaustion	2
Exhaustion and uremia	1
Asthenia	1
Respiratory failure	1
Toxicity and acidosis	1
Malignant toxemia (aversion to food)	1
Intestinal paresis or embolus	1
General sepsis	1
Ether anesthesia	1
Pulmonary embolism	1

In view of the present limitations of our knowledge concerning the cause of death, it is difficult to offer an intelligent discussion of the subject, but it seems that the causes enumerated above might all be included under two heads: respiratory and circulatory failure. While only one case is attributed to respiratory failure this is possibly the most common mode of death. At least it is possible in many cases to demonstrate a continuation of the heart's action after respiration has ceased. In such cases the question might arise, is this a case of death from failure of respiration or is it a cardiac death in which the heart, even though its beat continues audible, is not contracting with sufficient force to keep up stimulation of the respiratory center?

Some one has remarked that life has but two legs upon which to stand, the heart and the lungs. In discussing modes of death French & Preble (1) make the following statement: "Life, whether systemic or molecular, depends upon the proper performance of the functions of circulation and respiration. So death, whether the result of disease, of violence or of senile decay, is due ultimately to the cessation of these functions. The causes which result in the permanent suspension of circulation and respiration operate directly upon their mechanism, or remotely through the nerve centers which regulate their action. So important to the proper continuance of these functions is the maintenance of an uninterrupted action of the nerve centers, that it is customary to adopt the Classification of Bichat and to speak of death beginning at the heart, death beginning at the lungs and

death beginning at the head".

Failure of circulation may be sudden as in death from syncope and shock, or it may be gradual as in asthenia. It may result from anything that destroys the integrity of the heart muscle or the competency of the blood vessels thus overcoming the normal difference in pressure of the blood in the arteries and veins.

Failure of respiration may also be sudden or gradual. Sudden failure of respiration is due to a number of causes, as occlusion of these organs and paralysis of their muscles resulting from injury or disease, either local or central. Or obstruction by foreign bodies or extreme pressure, or strangulation by hanging or drowning and noxious gasses. Gradual failure of respiration is a common result of disease, especially those conditions which bring about a gradual obliteration of the lumen of the respiratory passages.

Death resulting from disease or injury of the central nervous system, or the operation of poisons or toxins upon vital centers is ultimately attained through failure of respiration or circulation.

Since the physician's chief end is to stay the hand of death, it seems strange that so little has been done toward the determination of the immediate cause. Such a determination should be of great practical value as well as scientific interest. No doubt most physicians have been struck with the similarity in the behavior of patients as death approaches, and the difficulty experienced in attempting to determine the probability of death by the extent of pathology.

Whitney (2) asks the following question: "Why does the organism which has succeeded in carrying a load of disabilities for perhaps many years, break down and cease to function at one particular time rather than another?" Gurd (3) in a discussion of the reaction to foreign proteins, suggests that death may supervene from arrest of respiration. Whitney (4) in an interesting clinical and experimental study of acidosis concludes that in the great majority of cases death is due to paralysis of the respiratory center by an increase of the acid radicles in the blood. I can do no better than to quote from Whitney's article.

"We must first inquire what is meant by death. The body as a whole may be said to have died when both respiration and heart beat have permanently ceased. But

we know that the heart possesses a wonderful intrinsic power of contraction, and that long after so called death a heart which has stopped beating may be made to resume its action either by artificial respiration or even by perfusion of the excised organ with suitable fluids. This is doubtless to be explained on the assumption that the heart itself is not dead, but that its action is inhibited for the time being by soluble substances, the asphyxial waste products of its own metabolism and function. The respiratory center, however, has no such power of resistance. It is known that the nervous centers are extremely sensitive to asphyxia, and that none of them will survive lack of appropriate blood supply for more than about eight minutes. After this time resumption of function is impossible even though circulation returns. Evidently, then, the death of the respiratory center is the essential element in the death of the body as a whole. In accordance with this it is well known that the respiration fails in the great majority of cases many minutes before the heart stops beating. In certain cases, of course, circulatory conditions may be the primary cause of death with failure of the respiration following immediately from lack of blood supply to the center. Thus, trauma of the heart, ventricular fibrillation, and perhaps other abnormalities of the heart-beat mechanism, may bring death as well as peripheral causes such as hemorrhage, embolism, intercranial pressure higher than systolic pressure, etc.

In considering causes of death of the respiratory center we will put to one side primary failure in blood supply, also failure of oxygenation (asphyxia drowning, gas poisoning) and trauma to the center itself. We shall still be left with the great majority of cases of death, and in these it seems evident that the failure of the respiration is due to soluble poisons acting on the center itself. Many drugs, of which morphin is an example, have a powerful depressing effect. Others, such as acids of any kind, have a primary stimulating effect, but in larger doses cause paralysis and death. It has been rather vaguely assumed that in morbid states certain soluble poisons accumulate which act in this way on the respiratory center, but little is known as to the nature of such poisons. Even in the case of the nitrogenous retention of nephritis we do not know which are the toxic bodies. Whipple has shown that the cause of death in intestinal obstruction and probably in pancreatitis, peritonitis and other conditions is a toxic proteose, but it is not

clear whether it is this proteose itself which poisons the respiratory center or some one of the products of the vigorous catabolism which the proteose causes in all the tissues of the body. Very little is known as to the nature of the poisons of infectious diseases and next to nothing about the supposed toxins liberated by malignant growths. Vaughn's work on split products of proteins and Jobling's on non-specific intoxications give promise of further development of the highest importance.

In applying the convenient Van Slyke method for estimating acidosis it was noticed that in a wide variety of cases the test ran parallel with that intangible but clinically definite entity known as "condition"—the sicker the patient the more likely he was (with important exceptions) to show acidosis. It was soon found that the majority of patients at the moment of death show a very marked acidosis."

After an extended discussion Whitney gives the following summary:

"The great majority of human cases studied showed a more or less marked acidosis at time of death.

In many of these the acidosis was of such degree that it may well have been the cause of death.

In others a lesser degree of acidosis was found which, combined with other toxic factors, may have caused death.

These results bear out to a certain degree the theories of Henderson and Fischer as to shock.

Infection seems to have a very marked influence in causing acidosis. All but one case in this series showing acidosis had evidence of severe infection. The cases which did not show acidosis did not have infection. A patient may, however, have marked infection with intoxication and show no acidosis provided his powers of elimination are active.

Two cases of death due to circulatory failure showed no acidosis.

Two cases of pyloric stenosis with tetany showed an alkalosis as well as a very high incoagulable nitrogen, indicating a severe intoxication.

Certain obscure toxemias are mentioned which are not necessarily accompanied by acidosis; for example, those of intestinal obstruction, Eck fistula, malignant tumors and pernicious anemia.

In all fatal cases, where the incoagulable nitrogen was estimated there was an increase at time of death, often very great, this indicating doubtless a marked tissue destruction.

Certain heart cases, though severe, may show lack of acidosis or an actual increase in blood carbonates, but they, too, are likely to show a certain degree of acidosis immediately before death.

As a result of the study of a series of cases of nephritis it appears that two factors are necessary to produce acidosis; failure of the power of elimination and an increase in the production of acid in the body. Cases with two-hour phenolsulphonephthalein output over 30 per cent show acidosis only if there is a severe toxemia, while those below 30 per cent. show acidosis as a rule.

As causes of increased acid production in nephritis; the toxemia of the active parenchymatous form in itself operative; infection is an even more powerful factor."

#### Comments:

In 1920 St. Anthony's Hospital extended care to 3048 patients, 1954 surgical and 1094 medical with a mortality of 2.3 per cent.

There were 73 deaths, 30 from the surgical service representing a mortality of 1.5 per cent. and 43 from the medical service representing a mortality of 3.9 per cent.

There were 20 autopsies; 6 from the surgical service and 14 from the medical service.

There was no reference to the cause of death in 33 cases. In 30 cases a specific cause was suggested other than the disease which had been diagnosed. In 10 cases the diagnosis was given as the cause of death. In no cases was there any evidence of special effort to determine the immediate cause of death.

Clinical observation shows that in many cases the heart's action continues after respiration has ceased.

Whitney's studies would indicate that in the majority of cases death results from paralysis of the respiratory center and that the chief cause is acidosis.

The value of records was emphasized in this study by the fact that it was possible to gather so much information yet the incompleteness of many of the records constitute the chief emphasis on this point.

#### Conclusions:

There should be a concerted effort on

the part of the management of hospitals and their staff members to make the records more complete.

A marginal or foot note summary of important points in the history and diagnosis of each case in red ink would encourage and materially aid in the study of case records.

The records of every hospital of consequence should be thoroughly studied with a view of utilizing accumulated information in connection with that reported from other institutions and for the purpose of ascertaining local influences or peculiarities, if any, and with the hope of stimulating a more conscientious study of cases, and a more thorough record of findings.

In order that the hospital statistics might be of more value it would seem wise to designate a special class to include all medical cases and all inoperable surgical cases, in which death is known to be inevitable at the time of admission.

There should be a closer study of cases dying in hospitals with a view of determining the immediate cause of death and if possible to devise some means of combating it. To facilitate such a study there should be a full time physiologist on the laboratory staff who should co-operate with clinicians in an effort to determine the forces which lead to the cessation of function. In connection with such a plan there should be an organized effort to encourage autopsies in order that there might be a proper correlation of clinical and pathological findings.

1. French and Preble: Death, Modes of, Reference Handbook of the Medical Science 1914.
2. Whitney's Studies on Acidosis, Arch. Int. Med. 1917-931.
3. Gurd Reactions to the Parenteral Introduction of Horse Serum in Man, Archives of Surgery, May 1921.
4. Whitney: Studies on Acidosis, Arch. Int. Medicine, 1917.

#### INOPERABLE CARCINOMA OF THE CERVIX: A REPORT OF THREE CASES IN WHICH RADIOTHERAPY ARRESTED THE DISEASE.

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The term Carcinoma signifies malignant disease of epithelial origin, situated in the cervix. It is of two types, one which arises from the squamous epithelium covering the vaginal surface of the cervix and designated

squamous-celled carcinoma, or epithelioma. The other arises from the glandular epithelium in the interior of the cervix and is designated cylindrical-celled carcinoma, or Adeno-carcinoma. The Etiology of carcinoma is as obscure today as it was in the beginning of the Era of Scientific Medicine. Many hypothesis have been forwarded, but all have been disproven by research work. Numerous factors are known to have a direct bearing on carcinoma, and chief among these are lacerations and erosions of the cervix. Laceration may follow instrumentation of any kind or delivery, this stimulated by a chronic discharge which is generally present and even by normal menstruation will cause the cells to proliferate. Once they are growing below the basement membrane they lose their normal characteristics and become malignant.

Carcinoma of the cervix extends in any one of four ways. 1. By the lymphatics. 2. By the blood stream. 3. By continuity and contiguity of tissue. 4. By implantation of tissue. Chief among these is by the lymphatics. Here it is that we find a difference in Carcinoma of the Cervix and Fundus. Quoting Ewing, in "Neoplastic Diseases" 1922. Page 559. "Uterine carcinoma, as a whole, cannot be classed among the tumors which early invade the lymphatics. Post mortem observation often suggests the striking tendency of the disease to remain localized, either to the uterus, or to this organ and its immediate vicinity, including the regional nodes and the tissues actually destroyed by the tumor. The autopsy records collected by Kroemer showed the lymph nodes free in 66 per cent of the fatal cases. In cervical carcinoma the early involvement of the parametrium and its nodes was fully demonstrated by Kundrat, who in 160 cases found these structures involved in 55 per cent. Here it can be seen that surgery offers more in completely eradicating the disease in uterine than in cervical malignancy.

What makes a carcinoma of the cervix of uterus inoperable? It may be inoperable from two major causes, the patient or the tumor. Many secondary conditions such as tuberculosis, diabetes, nephritis, etc., can render this operation almost a death blow to the patient. The tumor itself can be responsible for its inoperability. Crossen says that operable cases comprise those in which the malignant disease is still limited to tissues that admit of complete removal, and where the patient is in condition or can be put into condition to stand the rad-

ical operation. Crossen continues, "The lesson to be drawn from the work up to the present time is that ordinarily, recurrence is practically certain when the carcinomatous infiltration has extended so that it involves the bladder, the rectum, the outlying lymphatic glands, or connective tissue around the uterus."

It is here that Radiotherapy offers a solution, not, it is true, a cure, but these patients can be made more comfortable, the hemorrhage stopped, and in some cases even metastasis can be made to disappear. The local growth in most of the cases can be eradicated by radium, however, there is a serious chance of fistulae either, vesicovaginal or recto-vaginal. If this is explained to the patient, I do not believe there is one of them who would not run the risk of fistulae to get the benefits that are derived. Are these cases cured even when they seem to be clinically? I would say no, because they should be considered a carcinomatous patient for the rest of their lives. There is a peculiar property their cells may have in advanced age that makes them more subject to malignant degeneration than there is in an otherwise normal patient. However, there are some cases reported of five and ten years clinical cures of inoperable cases. I have been extremely fortunate in one respect that I have not had a fistula develop of any kind. In every case I make it a point to give the patient a carcinomatous dose irrespective of this chance. It has been proven that this element radium can act as a stimulant as well as a destroyer in malignant diseases and it is only hurrying death to apply it in any other way than heavy dosage well screened.

I have three cases of inoperable carcinoma to report, and do not mean to say that in every inoperable case as good results can be seen even with the best of Radiotherapy.

No. 1. Mrs. L. first seen August 8, 1922, 58 years of age, has had four children and always been in best of health until about eight months previous to examination. Her trouble began with a slight discharge, at times tinged with blood, which became more profuse, and during June 1922 she began to suffer pains in the left lower abdomen and has had one hemorrhage. She was examined by her local Doctor who pronounced it carcinoma and referred her for treatment, suspecting her to be operable. When examined bimanually it was found to have extended into the left parametrium which was indurated, and a mass the size of an

orange felt in the broad ligament. Cervix presented a cauliflower growth which obliterated the cervical canal, extending down onto the vaginal surface, probably three inches in diameter. This growth bled easily on slightest manipulation. Immediately, without section, she was given 2400 mgm. hrs. both inside cervix and against the cervix. September 28th, 1922, she was given 2000 mgm. hrs. as before. She was seen January 15th and the cervix was perfectly normal except for the fact that there was no lower or upper lip. It looked as if the cervix had been amputated. The mucous membrane, however, was unbroken. Along with the radium she was given the skin dose of the hardest x-rays filtered through six millimeters of aluminum and one sole leather, as soon as the reaction (first degree) had left she was given another, at present she is up doing her own housework, feeling fine, no discharge, no pain, and says that she feels like she is well.

No. 2. Mrs. M., 58 years, has had five children, youngest 25 years, she has never passed the menopause, and flows excessively at each menstruation. She has had pain down her left leg and has been confined practically to the bed for the last four months, never suspecting the trouble, but supposing that she was going through the change of life. Examination revealed a large fungating growth, two and one half inches in diameter, which has obliterated the cervix. Bleeds easily on manipulation. A mass twice the size of a grape fruit was readily felt in her left pelvis. She was given 2500 mgm. hrs. intra-cervically and against the cervix, on September 16, 1922. October 11th, 2000 mgm. hrs. as before. This cleared up the growth on the cervix. When she reported November 28th she had had up until then 90 m. a. minutes of x-ray in each position, and the mass did not seem to retract as it should. I immediately told her that I was going to give her an extra hard dose of x-ray and deliver this amount in one sitting. She had a violent reaction, next day was nauseated, could not keep anything on her stomach, and a tenesmus of both the bladder and rectum set up in two weeks. At this time the skin over the points of entrance, showed a severe first degree reaction, but the skin remained intact. She is now up doing her own housework, free from discharge, no pain, the metastasis has entirely subsided so far as bimanual palpation can detect, her cervix is clear of involvement, mucous membrane is unbroken. It is awfully hard to get this patient to come back for follow up exam-

inations.

No. 3. This is a negro woman, age 38 years, five children, youngest seven years, two miscarriages since the last child's birth, her trouble began with a pain in the back and left side, watery discharge at first, which became blood tinged later. R. B. C. 3,400,000, whites 12,200, hemaglobin 75 per cent, cervix presented a large cauliflower growth, approximately the size of a hen egg, and radiated into her left pelvis with a hard and indurated resistant mass. The uterus was entirely bound down by adhesions. She was given 2500 mgm. hrs. of radium on December 19th, 1922. On January 25th, 2000 mgm. hrs. On March 8th the cervix was normal. She had four different x-ray sittings, which comprised 300 m. a. minutes to each position. The pain in her left side and back have left, she is doing her own work, there is not the slightest discharge present.

In looking over these cases the hardest thing at all is to get the patients to report for follow up examinations, and treatments as they should. It should be said that when a patient is treated with radium, be sure that you deliver in one dose more than a carcinoma dosage, and a good way to do this and protect the normal skin is to place applicator first inside the cervix, and then later lay it outside the cervix and in the culdesac if possible. This will distribute it over the mucous membrane that may be normal, and save any that may be there. I have not seen a case that was beyond this treatment yet, although they can be so far advanced that this will not offer anything, and too, the patient may not be able to come down town for x-ray treatment.

#### PROCEEDINGS OF THE UNIVERSITY HOSPITAL CLINICAL SOCIETY

Oklahoma City, Oklahoma

**Dr. R. E. Looney** in Charge of Presentation of Obstetrical Cases with Intercurrent Diseases. **Dr. Looney:** A Case of Pernicious Anemia Complicating Pregnancy. The first case we have is one of pernicious anemia. About three months before this patient came to the hospital she began to notice increasing weakness, loss of general vitality and swooning. When she came in she had a white blood count of 1600 with a red count of 1,200,000. Three days later the white count was 2400, red count 1,000,000. The white count now is 3600, and red

1,000,000. **Dr. Fishman** saw this patient and made a diagnosis of pernicious anemia, with recommendation of transfusion and iron. This patient is near term and the pernicious anemia is being treated independently of the pregnancy.

On the obstetrical service at this time we also have the following cases: Influenza, Pyelonephritis, and Erysipelas.

Regarding the case of erysipelas. She came to the hospital at about eight months of pregnancy and gave birth to a normal baby five days later. The labor was uneventful and the baby all right at this time. The case was seen by **Dr. Lain**.

**Dr. Lain** (discussing case): **Mr. Chairman:** There is nothing out of the ordinary about this case. She had a temperature of 103 and pulse of 95 on admission. The erysipelas started about five days ago on left side of face and shoulder and neck. She was rigidly isolated on admission. The origin seems to have been at the usual site in the nostrils. The majority of cases start from abrasions in the nostrils often from picking the nose. Cultures from the nose showed streptococcus. This case had wet pack of alcohol, glycerine and camphor. It ran a course of about six days and began to subside, temperature being about 100 when labor pains began.

**Dr. Looney:** The above patient was delivered in her room without vaginal examination. The child was normal in every respect and was immediately isolated from the mother. The child has remained normal. The mother has been without rise of temperature for several days. With reference to erysipelas cases—we know that these cases with erysipelas will frequently go on to term without interruption. This patient was near term and the erysipelas perhaps had little to do with the fact that her labor occurred at this time. There are many cases of acute infection that have an important bearing on labor and these we intend to show in connection with **Dr. Fowler's** cases. **DR. WANN LANGSTON:** The hospital could not ordinarily take care of a case such as the above on account of its contagious character.

**Dr. Fowler:** A case of Pregnancy Complicated by Influenza and Pyelonephritis: This case is on **Dr. Looney's** service and it is through his courtesy that I am presenting it. **Mrs. S.** hospital No. 20383 was admitted to State University Hospital on Feb. 5, 1923, complaining of pain in back, fre-

quence of urination and amenorrhea for four and one-half months with nausea since beginning of pregnancy. She cannot speak above whisper and satisfactory history is difficult to obtain. She has had pain in back at times for last seven years. This with the frequency of urination has been decidedly worse since pregnancy began. She developed what appeared to be an influenza a few days prior to admission.

There is increased whispered sounds over left base. She has a cough at this time with moisture over both sides. Sputum shows gram negative diplococcus and no tb. The physical examination shows also an advanced pyorrhea. Blood pressure is 102 over 60. There is tenderness over the right kidney, and the signs of a four and one-half months' pregnant uterus. The blood chemistry shows NPN 64.5, urea nitrogen 35.4. The blood count on admission was 10,000 whites with 76 per cent. polys. Two days later, 7500 with 85 per cent. polys. Wassermann was negative. Temperature ranged between 98 and 100 degrees. The urine has shown presence of albumin most of the time with many white blood cells.

**MANAGEMENT:** Rest, food and fresh air are depended upon principally in the treatment of the flu and whatever toxemia she may be getting from the pyelitis. The general treatment of nephritis has been followed, namely, bland diet consisting principally of carbohydrates and fruit juices, liquids freely, free elimination by the bowels. The acidosis has been treated by the administration of sodium bicarbonate. In the treatment of pyelitis the question of drainage is of primary importance. The best urologists today do not take the position that the uterus should be emptied in pyelitis. If you can not get drainage by changing the position of the patient that can be accomplished by passing the ureteral catheter up the ureter beyond the pelvic brim. A steady flow of urine will indicate that the sack of infected urine contained by the dilated upper ureter and pelvis of the kidney has been reached. This catheter may be left in for 12 or 24 hours then removed and reintroduced later if needed. This patient evidently is getting fairly good drainage as indicated by the absence of chills and fever and a comparatively low white and poly count. She is having contractions of the uterus and an abortion will probably follow before long.

**A Case of Influenza with Threatened Abortion:** Mrs. C. Hosp. No. This patient came into the State University Hospital

with influenza and threatened abortion. There is nothing of special interest about her history and physical examination aside from this fact.

Both these cases are influenza infections coming to the hospital because of that fact. We all know that influenza has been very disastrous among pregnant women. We are undertaking to accomplish something in the way of prophylaxis by having the social service department notify all patients registered in the prenatal clinic to avoid contact with influenza as far as possible by staying away from picture shows, church, street cars, etc. To isolate themselves from any member of the family if they become ill. If she develops any symptoms of respiratory infection she is advised to go to bed and notify the doctor at once. Written instructions to this effect have been mailed to all patients at times of respiratory epidemic. I believe that it is more than a coincidence that during our various epidemics since 1918 that we have not had the termination of a single pregnancy among either private or clinic patients among whom this precaution has been taken. If the patient goes into labor she is kept free from pain during the first stage by the use of morphine and scopolamine and the second stage is terminated as a rule by low forceps.

**Dr. Wells:** A complication of influenza is a very serious affair. I think it is a good idea to keep pregnant patients away from influenza cases. Now in regard to pyelitis, which this patient has, certainly we are all agreed that the patient should not be aborted at this time because of the influenza. I believe that we are agreed that we should not abort pyelitis cases, but if we have a pyenephrosis or a tubercular kidney then the case should be aborted.

Now in regard to the influenza case, my experience has been that these cases usually abort and if they abort they usually die. The abortion seems to be caused by hemorrhages into the placenta, causing a separation of the placenta. This patient is very sick, and if she should abort the chances are that she will die. I believe the treatment of this is supportive and expectant.

**Dr. W. J. Wallace:** In the treatment of pyelitis of pregnancy, we should bear in mind that this acute condition is more than likely the result of a chronic trouble which has been existing perhaps even from childhood, or else following some of the infectious diseases, and the pregnancy acts as the exciting cause for the exacerbation.

In the case which has been presented tonight on account of certain symptoms, an abortion had been mentioned; of this I most heartily disapprove, as I do not think this is necessary in any case of pyelitis.

From the blood chemistry, urinary analysis, and clinical findings, I think this case is not only one of pyelitis but also of pyelonephritis.

When these cases are very septic and give evidence of uremia, and the ordinary measures afford no appreciable relief, then the ureteral catheters can be placed and drainage established. Usually though, this is not necessary as the patient can be taught to assume certain positions thereby establishing drainage in the normal way.

As to the treatment, I most heartily agree with Dr. Fowler, but would like to emphasize the necessity of a great deal of water, preferably distilled, as well as free catharsis.

Dr. Will: I would like to ask Dr. Fowler and Dr. Looney if it makes any difference as to period of pregnancy as to the treatment of pyelitis; pyelitis probably being a pyelonephrosis if beginning without the influenzal complications, what would they advise?

As the pregnancy advances pyelitis becomes more severe from pressure on the ureter and as a result of the pressure you are unable to get drainage. The idea of putting in ureteral catheter looks good, but the drainage that you would get from a small catheter would be very small.

The condition this woman is suffering from now is probably a pyelonephritis or surgical kidney. Granting that this is a surgical kidney and the woman was free from influenza, would you advise surgical interference?

Dr. Hatchett: I think it is rarely justifiable to empty the uterus in obstetric pyelitis. The temptation to do so is fostered by the apparently grave clinical picture shown by some patients who nearly always make an ultimate recovery without interference. In many cases the ominous symptoms are out of all proportions to the real danger, giving the clinical picture of the acute surgical abdomen. When the obstructed pelvis and ureter discharge their urine and pus into the bladder the symptoms rapidly disappear. These attacks may take place from time to time during pregnancy whenever the ureter becomes blocked causing anxiety and trying the patience of the doctor; but if there is no toxemia of

the mother, the child does not suffer and the mother after labor generally makes a rapid recovery. Patience on the part of the doctor and ureteral catheterization if indicated should obviate the necessity for an abortion in nearly every case.

Dr. Looney (closing): In regard to this case of pyelitis I do not believe an interruption of the pregnancy advisable. I believe this point must be decided in each individual case. Dr. Will mentions the fact that some go through all right. That is true. I think, however, if the symptoms show up early in pregnancy and are aggravated by the condition, the interruption of the pregnancy might be good practice, and is in instances admirable, but I believe this depends on the individual case. I do not think as a general classification the pregnancy should be interrupted, but in some instances I think it quite a justifiable procedure.

Dr. Fowler (closing): The pyelitis seems to have provoked most discussion. The problem of pyelitis at any time is that of alkalization, elimination, rest, bland diet, and especially important, drainage. PYELITIS SHOULD NOT BE MADE AN EXCEPTION TO THE OLD AXIOM IN SURGERY, "WHERE THERE IS CIRCUMSCRIBED PUS, DRAIN IT". In regard to Dr. Will's question as to the management of a surgical kidney in pregnancy in the absence of flu, it is a general rule in obstetrics that suppurative conditions complicating pregnancy should be dealt with just as if the pregnancy did not exist. The surgical kidney in pregnancy should, therefore, be dealt with surgically as at any other time. Pyonephrosis not infrequently develops in these cases and there are sometimes multiple abscesses of the cortex only. These cases are likely to be bothered with a great deal of vomiting. This has been a very troublesome symptom in this case. This should always make us feel, in my opinion, that we have a dangerous condition to deal with.

But this is not a case of pyelitis merely but of nephritis and, of perhaps equal or greater importance, influenza. In the absence of flu the usual procedure in nephritis is to treat medically and, if the nephritis is improving, let the pregnancy alone. If the nephritis ceases to improve or grows worse the pregnancy should be terminated. This requires the closest observation, blood chemistry, the various renal efficiency tests, etc., and the most careful study on the part of both obstetrician and internist. For these

reasons all such cases should be cared for only in a well-equipped hospital.

Any sort of termination of pregnancy in influenza is a thing to be dreaded. Should further blood chemistry and renal efficiency tests indicate that the kidney damage is becoming worse, the very difficult decision would have to be made as to whether it would be better to accept the inevitable back-set that would come with the termination of the pregnancy in this already critically ill patient with the flu or to let the pregnancy continue at the risk of a fatal damage to the kidneys.

#### **Dr. A. L. Guthrie: Acute Purulent Mastoiditis with Presentation of Cases.**

The recent epidemic of Influenza has again brought our attention to the importance of prompt and careful treatment of the ear complications in the course of infectious diseases.

The Etiology of Acute Purulent Mastoiditis is essentially the same as that of Acute Purulent Otitis Media the improper treatment of which being the deciding factor whether the pathological process is limited to the tympanic cavity or extends to the mastoid cells. In other words, the proper treatment of Acute Purulent Otitis Media will, in a majority of cases, prevent the more serious condition of mastoiditis.

For all practical purposes Acute Purulent Mastoiditis may be divided into two types: First, those cases which have pain of deep seated character and usually radiating over the corresponding side of the head. Second, those cases without pain but characterized by an ever increasing discharge of great volume after the time when it should diminish if only the tympanic cavity and antrum were involved. These cases may continue with practically no symptoms other than the persistent discharge. The X-ray renders valuable aid in establishing a diagnosis here.

Our treatment is palliative and operative. If we see the case early the following treatment is carried out: Rest in bed, thorough drainage of tympanum by a free incision of tympanic membrane. Hot boric acid irrigations of the external auditory canal. Free catharsis. Ice cap to mastoid for 24 hours. If our manifest symptoms such as pain, tenderness, temperature, leucocytosis, etc., have not improved within 36 to 48

hours we proceed to open the mastoid and eradicate all diseased cells.

There are other cases with the following symptoms in which operative procedure is indicated at once:

First: Fluctuation over the mastoid indicating a sub-periosteal abscess.

Second: When palliative treatment fails.

Third: When palliative treatment has been apparently successful with a recurrence of symptoms after one week or more.

Fourth: The onset of acute symptoms several weeks after the onset of an acute otitis media.

Fifth: An acute purulent mastoiditis occurring in the course of a chronic purulent otitis media.

Sixth: The onset of facial paralysis.

Seventh: Symptoms indicating the extension of the process to intra-cranial structures.

Eighth: Cases of streptococcic infection with tenderness over the mastoid and a sagging of the superior-posterior portion of the external auditory canal.

I wish to present four cases which are illustrative of some of the points mentioned above:

First case has made an almost complete recovery with palliative treatment. Free drainage was established early.

Second case upon admission to the hospital gave a history of acute purulent otitis media beginning three weeks ago—with some mastoid symptoms at that time. The symptoms of acute purulent otitis media persisted with a recurrence of the mastoid symptoms the day before entering the hospital.

Third case was apparently making a satisfactory recovery, without any operative interference, until the eighth day when there was a recurrence of acute symptoms. Operation was performed immediately.

Fourth case suddenly developed a paresis of the facial nerve during the course of an acute purulent otitis media. All branches of the nerves were involved showing the lesion to be somewhere extracranially. A mastoid exploratory operation was advised and begun but not completed on account of the general condition of the patient—during the operation. This patient has a

marked aortic regurgitation and did not stand the anaesthetic and operation well. The operation was a failure for the purpose it was instituted viz: relief of the facial paralysis.

### DISCUSSION

Dr. Todd: This has been a very interesting subject to me for some years past. I disagree with most everyone so I hesitate to talk about mastoid operations. When it is clear that we have an acute purulent mastoiditis it is easy to take care of the case by doing a simple mastoid operation, but the ones that perplex me are those that are not typical, the type with a profuse discharge without definite mastoid symptoms. These cases demand operation as well as those with more marked symptoms. Cases of acute purulent otitis media where the discharge becomes more profuse under treatment should be operated upon at the end of 14 days.

Dr. Early: This subject has been very well discussed by Drs. Todd and Guthrie. I think the thing of importance is the early paracentesis in acute middle ear infections. If we do this we will avoid a great deal of mastoid trouble later.

**Dr. A. A. Will:** A Series of Cancer of the Rectum and a Case of Megacolon.

The first patient, Mr. P., age 26 years, a Veterans Bureau case had the onset of his trouble after eating canned food he says when a dysentery set in which lasted two or three days. He had uncontrollable bloody movements. He was sent to the University Hospital. After finding a negative Wassermann and negative therapeutic test with K. I. but positive findings with the proctoscope a diagnosis of carcinoma of the rectum and pelvic colon was made. In March, a colostomy was done and later there was a second operation, namely, removal of the affected colon and rectum from below by the actual cautery. The patient was up and around in four weeks. He developed perfect sphincter control through the rectus. In a few weeks he left the hospital. At home after this he complained of his bladder. He received some irrigations for this. When next heard from at the University Hospital it was on his arrival here on a stretcher suffering with a severe cystitis. I think the radium treatments given in this case injured the bladder. The prognosis at present is bad on account of the septic condition from the bladder.

The second patient is a Spanish War Vet-

eran. He has had a number of minor operations for fistula, hemorrhoids, etc., but has always been robust. He entered the University Hospital about four months ago. He was well until one month before entering the hospital. His complaints then were bloody stools, dysentery, and cramps. Proctoscopic examination showed well developed malignant ulcer in middle third of rectum up to the pelvic colon. The abdomen was opened and a mass having the characteristics of malignancy seen. We brought a loop of colon above this up out of wound doing a colostomy and then stopped, that is no second operation has nor will be done on this patient. His colostomy has worked fine as you can see (patient demonstrated cup worn over opening). He has received a little K. I. for his asthma and has had three deep x-ray treatments. He is gaining weight and is in an excellent state of nutrition.

Dr. Reed: "Has the patient had a Wassermann?"

Dr. Will: "Several on the blood and all negative."

Dr. Lain: "How many x-ray treatments has the patient received?"

Dr. Will: "The chart shows three."

Dr. Will (continuing): We are proud that we did not remove the rectum of this man. I believe that the operation of removing the rectum will be relegated. Dr. Crile is the only man now who reports removing carcinoma of the upper two-thirds of the rectum.

The ages of the patients whom we have had with carcinoma of the rectum are as follows: 36, 39, 23, 55, 37, 56, 48, 50, 36, 51 and 60 years.

It is a question how much surgery should be done in cases of carcinoma involving upper position of rectum and pelvic colon. From the results obtained in this clinic, I believe my routine in the future will be a colostomy and deep x-ray therapy, unless the patient demands a complete extirpation of the growth.

In all patients reported in this series every test, and instruments of precision have been used to make positive diagnosis of malignancy before operation was suggested.

Radium has not proven of any benefit in my hands as a therapeutic agent in carcinoma of this region, but I do believe deep

x-ray therapy has given us some results.

Drs. Will and Heatley (demonstrating x-ray pictures of a case of megacolon):

This woman complained of obstipation and occasionally running off of the bowels. She had a doughy feel to her abdomen. The proctoscope slipped up without trouble. X-ray with barium enema, as you see, shows a very marked enlargement of the entire colon. The colon is transposed the cecum being on the left side.

The bowel was emptied by continuous enemas. There was a continuous emptying out of fecal matter. This patient had the skin and the mucous membrane lesions of pellagra.

Hirschsprung said resection of the colon was the treatment for this condition. Later men advise anastomosis of the lower ileum to the lower rectum.

### DISCUSSION

Dr. Lain. We appreciate the very frank and conscientious way which Doctor Will reviews his cases of carcinoma of the rectum which have been operated upon. As has been said, carcinoma of the rectum is usually far advanced or metastasis has begun before the diagnosis is made. Therefore, the percentage of cures is low. The x-ray no doubt is of value in helping to destroy the metastasis which may have already taken place in the adjacent glands. Radium, when applied direct to the growth, is one of our most valuable agents in the particular region in which it is used. It usually causes a fibrosis of the malignant cells and when placed in the lumen of the bowel we must guard carefully against strictures which generally follows its use.

The Mr. C. who has been spoken of is very much improved. You recall that he has been in the Hospital for about two years. When he came to the Hospital he had a marked well developed carcinomaous growth about four inches above the anus. Almost complete obstruction of the rectum had already taken place. He has had three or four series of radium and deep x-ray. At the last examination which was made a short time ago we found the original lesion very much reduced. In fact the entire mass now feels to be nothing more than a contracted fibrosis and is at least at the present time is not an active lesion. Of course, the final outcome is yet to be seen, though at the present time his condition is much more favorable.

I regret that so many surgeons have be-

come discouraged with radiotherapy in these extreme cases of carcinoma of the bowel. They expect too much of radium therapy. It is a most valuable agent and is curing a few cases all of which are the early stages or which have previously had radical operations which have removed the major part of the malignant lesion. The prognosis from radio-therapy like that of surgery largely depends upon the location of the lesion and the extent of metastasis which may be inaccessible.

As regards the oft mistaken diagnosis in these regions will say that a syphilitic gumma will get worse or rapidly necrose under x-ray treatment. Therefore x-ray is a very good therapeutic test as regards whether the lesion is syphilis or carcinoma.

Dr. Reed: When in doubt give K. I. It often cures patients and gets results. Lues attack the alimentary canal most often in the pelvic colon. The characteristic of the luetic lesion here is a cylindrical mass which gives slowly increasing obstruction. K. I. cures such cylindrical masses and the patients' symptoms are relieved.

However, a small ring-shaped mass in the colon here, limited in extent, and giving quick obstruction, is carcinoma. Blood in the stools plus an x-ray showing any ring constriction should call for a laparotomy for exploration. I believe you can cure carcinoma of the colon especially of parts other than the pelvic colon.

Dr. LeRoy Long: Notwithstanding the significant reference to the potency of K. I. in suspicious lesions involving the rectum, I am of the opinion that all the cases reported in this series are cases of carcinoma.

It should be remembered that carcinoma is far more frequent in the rectum than in any other part of the large bowel. I think that statistics show about 75 per cent occurs in the rectum. If that is true, the number in this series is not an unusually large number for the time covered in a clinic like this, especially when we take into consideration the fact that during the same time there were a number of cases of carcinoma of other parts of the colon in which the diagnosis was established definitely. The proportion, therefore, is not greater than that which statistics show to be the average.

I wish to commend the conservative plan of treatment indicated by Dr. Will. In my judgment, in the case of the patient who

has cancer of the rectum, a colostomy should always be done as a preliminary procedure, regardless of what may be done later. The results following excision are bad enough at best. To undertake such a radical operation without a preliminary colostomy is to court disaster.

It is with much regret that I have to state that I am greatly discouraged by the results of treatment of cancer of the rectum, of cancer of the viscera of the abdomen—in fact, of “deep cancer” anywhere—by radio active agents. I say this not only with regret, but with a feeling of despair, for surgery had looked forward to the promised results of intelligent team work. I trust that further study, investigation and improvement of technic will make it possible for us to realize the relief for which we once hoped.

Dr. Will (closing the discussion): All methods have been used in establishing the diagnosis of malignancy in these cases. We have given sixty grains of K. I. in tubular strictures without benefit because it does not affect the connective tissue that has formed. These are all cases of carcinoma of the middle or upper third of the rectum. I understand now that the radiologists do not use radium in any hollow viscus.

For diagnosis the barium enema tends to fill out the whole rectum and does not show filling defects as nicely as by comparison in x-rays of the stomach. There isn't an early symptom of carcinoma except seeing it. The only way to make an early diagnosis is to look at the rectum through the proctoscope just as you look through the cystoscope.

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PROCEEDINGS OF THE OKLAHOMA  
CITY CLINIC  
CANCER—METASTASIS

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A. L. BLESCH, M. D.,  
Oklahoma City, Okla.

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Case 1. This is a case of carcinoma of the breast in a woman of 50, upon which I did a radical operation two years ago. The disease was far advanced when the patient came seeking relief. The glands in the axilla and along the clavicle were extensively involved and an operation as radical as possible was done after which a thorough course of irradiation with x-ray and radium was done for us by Drs. Lain and Roland.

She returned about a year ago with delusions of persecution from which she seemed to fully recover in a few months time. At this time she showed recurrence in the skin which I widely excised.

Again she returned six weeks ago with recurrence in the cartilage of the ribs and in the supra-clavicular glands. For some time she has been suffering sharp pains in her limbs, especially the left leg which she has had treated for rheumatism. Also vision in left eye is lost. Disc choked. X-ray of spine shows metastasis in lumber region.

Case 2. Man of 35, always has been healthy and feels well now except for an enlargement of the testicle which he first noticed six months ago and which has increased in size progressively until now it is as large as a good sized apple. It has never been tender or painful except from the drag on the cord due to the weight. This is relieved by support. Physical examination is entirely negative except for the right testicle which is uniformly enlarged to the size of one's fist, of even contour, quite hard in consistency, not especially sensitive. Enlargement extends into and involves a thickening of the cord structures.

Clinical diagnosis: Malignant neoplasm of testicle.

Operative diagnosis: Carcinoma testis.

Operation: Radical orchidectomy with dissection of retro-peritoneal glands along iliac vessel to kidney, all of which were microscopically malignant.

Prognosis: Operative good. Ultimate gloomy.

Patient returned six months later with a massive right upper abdominal retro-peritoneal recurrence which was inoperable.

Again returned three months later with blindness and severe headaches. Both discs choked.

These two cases are not reported in order to bring out anything new relative to cancer, or to metastasis but merely to emphasize metastasis in brain and bones and to further impress the idea that such metastases are far from uncommon. This is

probably true that these as well as metastases into other tissues are at times the only symptoms present, the original tumor slumbering quietly in the depths. In that case erroneous diagnosis is very likely to be made. Every patient, no matter how trivial the complaint, deserves of us a most painstaking examination. Often we can learn what a patient has by finding out what he has not.

#### A CASE OF RENAL HEMATURIA APPARENTLY CURED BY DISTENSION OF KIDNEY PELVIS.

JOHN Z. MRAZ, M. D.,  
Oklahoma City, Okla.

Case No. 8973. Male, age 61. Reported to the Clinic for examination January 13th, 1923.

Family and part personal history negative.

Present trouble: Began about five years ago when patient was awakened by what appeared to be a left renal colic which was severe enough to require morphine by hypodermic for relief and was followed by a bloody looking urine lasting for a day or two. A few weeks later had a recurrence of above symptoms but pain was not so severe.

Patient felt well until three months ago, when following a long automobile trip, he began passing bloody urine, and this has continued to present time. Urine is usually deeply colored with blood and some days it is of a lighter color, but never clear. The only pain patient has had has been a dull ache in left lumbar region sometimes crossing to the right and this has developed in the past two or three weeks. There has been no weight loss and patient's health has apparently not suffered in any way.

Physical examination: Negative, except as follows: Some tenderness to deep pressure in left lumbar region. On deep inspiration a mass is felt slipping down from under left costal margin, which, however, disappears under ribs when patient exhales, and which cannot be held down.

Cystoscopy: Bladder appears negative and does not show any bleeding points. Left

ureter catheterized—catheter passes to kidney new pelvis without obstruction. A bloody urine immediately begins to drop from catheter. P. S. P. appearance, time three minutes. Left kidney pelvis injected to point of pain with 7 c.c. sod. bromide sol.

Roentgenograms show a renal pelvis well injected, normal both in size and contour. No stones seen. Kidney in normal position.

Uranalysis negative except for many red blood cells.

Diagnosis: Hematuria of left renal origin, cause undetermined.

Advice given patient: Repeated observation with further cystoscopy study later, if necessary.

Subsequent progress of case: Patient reports one month later and states that urine has been perfectly clear since cystoscopic examination. No other symptoms have developed. Uranalysis at this time entirely negative.

Remarks: Here is a case of renal hematuria which continued without intermission for over three months, and which ceased immediately after a thorough distension of the kidney pelvis and has not recurred to the present time, a period of nearly three months. While I have not heard from the patient in the last few weeks I am sure he would report as soon as he noticed a recurrence of blood in his urine. I do not class this case as one of essential hematuria for I believe that to be simply an admission of inability to determine the cause.

The bleeding in this case I believe was caused by some superficial condition in the pelvis of the kidney most likely slight varicosities in the papillae. This belief is strengthened by the fact that no sign of stone or infection or tumor was found in our workout.

Several men have reported cases of cessation of renal bleeding after thorough distension of the renal pelvis with various fluids and this is in all probability another such a case.

Whenever there is blood issuing from a kidney, an exhaustive study should be made

of the case for only by such means can we hope to detect cases of renal tuberculosis or renal tumor early, while there is time for a permanent cure by appropriate treatment.

When, however, a thorough study fails to bring to light any perceptible pathology, then I believe that distension of the kidney pelvis should be given a trial before recommending more heroic measures, such as nephrectomy.

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### CASE OF REFLEX VOMITING. LARGE CYSTIC OVARY

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D. D. PAULUS, M. D.,  
Oklahoma City, Okla.

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Patient, female age 27. Family history negative. Was healthy child. No illness or injuries except for operation in 1917 and tonsillectomy two years ago. Operation consisted of an appendectomy, bilateral salpingectomy and facial fixation of uterus. Para II. Menses began at 12. Regular 21 day cycle—six days duration. Flow has been always more or less painful and rather free. Last period eleven days ago. Has always been of nervous temperament. Since operation six years ago has had attacks of nervousness bordering on hysteria.

**Present Complaint.** Started one week ago with an attack of nervousness similar to some previous attacks, except that this time it is associated with nausea and persistent vomiting. Has vomited or rejected all nourishment since attack began. No chills, no fever. Has had nervous rigors, however. No history of previous gastro intestinal disturbance. At first attack looked like intestinal "flu". According to family physician did not have diarrhoea or cramping. Lost seven to eight pounds in past six weeks. No urinary disturbance. For past year patient has been troubled with a great deal of pelvic soreness, a constipated bowel movement causes pain when passing "through pelvis".

**Physical Examination.** Fairly well nour-

ished young female with "pinched expression". Temperature 99.2. Pulse 100. Pupillary reaction negative. Mouth and throat negative. Glandular system negative. Chest negative. Abdomen shows well healed scar of previous operation mentioned above. Entire abdomen sensitive to palpation. No rigidity. Considerable sensitiveness over supra-pubic region. Pelvic examination shows uterus high and attached to abdominal wall. Is rather large and tender. Mass on left side, size of small orange and quite tender.

**Laboratory.** Urine negative. W. B. C. 7,500. C. O.2 of blood plasma 46 volume 70, indicating slight acidosis.

Due to patient's condition, it was thought advisable to give 300 c.c. of 10 per cent glucose intravenously at once to supply fluids to body. Sedatives were also given by rectum. Within 18 hours her pulse had dropped to 88. The next morning patient retained some semi-solid foods. Cereal breakfast food and toast. Still belched a great deal and complained of being nauseated. The condition was considered a case of extreme nervous vomiting and the patient was told that unless she could retain food, it probably would be necessary to pass a duodenal tube which would have to be kept in place and that she would have to be fed through this tube for several days. This had the desired psychological effect and patient did not vomit again after that.

One week later she was operated. A cystic ovary size of medium size orange was found. Uterus large and was removed, a supra-vaginal hysterectomy being performed. Gall bladder and stomach normal. Patient made uneventful recovery.

The question arises whether this was a pure case of nervous or hysterical vomiting or whether it was influenced reflexly, thru large cystic ovary. From the previous history of the case and the findings one would be led to the belief that the large cystic ovary was undoubtedly a factor but that the extreme nervous condition of the patient was the predominating factor.

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### EDITORIAL

#### A SUGGESTED ROUTE TO THE SAN FRANCISCO MEETING

Your editor, being a lazy man, undertakes by this means to answer all the letters received as to the route to San Francisco. It is believed that if the suggestions made are followed, that is, in general, satisfaction will be had as a result.

First, it goes without dispute that the Santa Fe Railway system is our very finest, both as to equipment, cuisine and comfort. Then it takes one to strange places not hardly believed to be existent until seen—at Los Angeles one may continue southward to San Diego, the headquarters

of our present great Naval command in the Pacific, then turning back northward at Los Angeles one may use his option with little or no extra cost and travel over one of the most beautifully scenic spots in the United States via the Southern Pacific Coast Line. If boats are preferred, it should not be forgotten that the Pacific boasts two of the fastest passenger boats in the world, the Harvard and Yale, which leaving Los Angeles (or Port San Pedro) in the morning dock 18 hours later after passing through the Golden Gate at San Francisco. This suggested route, of course, has many small side trips and stopovers not necessary here to enumerate, any one of which may be taken as the traveler wishes and finds the time and inclination for indulgence. In fact, there are so many variations that a week's study of railway time-tables and descriptive folders only leaves one unsettled. From San Francisco there is no question, if one intends to come as nearly directly home as he can, that the Western Pacific Railway, which for many miles climbs up and through the Feather River Canyon, offers the scenically beautiful ride of the entire trip. It is not gashed and barren like the Royal Gorge, but is covered with towering peaks, waterfalls, a wild, rushing river, all mingled with the odor of the tamarack and other balsamic growths. This line leaves Oakland Mole (sea level) at 8:00 a. m. and twelve hours later has reached the top of the Sierras, or rather the lowest pass which could be found to build one of the most remarkable railways of our country through. At the top of this hill the elevation is more than four thousand feet above sea level. At Salt Lake one may also see unusual sights, finally escaping from that great inland bowl through the Tennessee Pass and the Royal Gorge, which latter, by the way, is the source of our own Arkansas River.

If the visitor so wishes, for a small additional amount the trail may be made to verge far to the northward, over the Mount Shasta Line, through Seattle, Portland, then home through the mountains of Idaho, Montana or one may go further afield, returning through the Canadian Rockies via the Canadian Pacific, Winnipeg and St. Paul.

As the opportunity to visit the great Pacific regions of our country does not often arise, those fortunate enough to be able to attend should carefully map out their program in advance if they are to derive the most benefit possible from the trip.

## THE DOCTOR IN POLITICS

Just what process of reasoning produces the inane idea that simply because a man is a physician is he to avoid all thought, consideration and participation in what is commonly called "politics"? The JOURNAL for years has had its editorial ears tinge with the foolishly expressed idea or dictum that a physician should take no interest in politics. Why? There is not a single blessed good reason for our aloofness in the matter of the science of government under the sun. The idea is born of utter selfishness, stupidity or thoughtlessness. No man is better qualified to consider the political ills of his country than is the good, average physician, thrown in daily contact with the woes of our present system of misgovernment, yet, too often do we have to observe the self-annointed "high-brow", attempting to maintain himself upon a pedestal, all of his own erection, helpless, impotent, uninfluential—about as poor a spectacle as one wishes to see—nursing his delusion of "I take no interest in politics". This strange attitude seems to forget that some of the worlds greatest leaders, and this is especially so in foreign countries, are mere physicians. They do their bit, and vastly more in carrying out the routine of their daily work, but they add to the luster of a profession already far above many, by entering the public forums and there directing the destiny and affairs of their nations. "I take no interest in politics" is a perfectly good statement or creed to be maintained by the shiftless, but who is better qualified to lead the way in so many important matters of daily life than the good general physician. We have had to blush at the obvious unfitness and manifest ignorance of some of our so-called "medical politicians", sent to the legislature by a constituency not a whit better than the men they sent to misspeak for them. A sorry figure they cut, helpless against the onslaughts of the fairly well informed layman, the butt and object of baiting from all sides, but, they were not physicians in any sense of the word. More often they were poorly equipped drugstore loafers, whose only scientific ability as to medicine was that acquired by a lazy perusal of printed propaganda issued by some commercial house with something to sell. It is the duty of every physician, and more so today than ever before, to carefully observe every transaction affecting the public business going on about him and state his position on the problems of the day without equivoca-

tion. As the matter stands our state legislative bodies are too often composed of the very poorest class of men. From the day they arrive at the State Capitol too many of them are actuated, not by high ideals and principles, the good of the masses which they so loudly prate over, is forgotten, and we have the humiliation of seeing them trade about and jockey in the interests of some small local institution, of itself located in some unearthly spot to placate and win over the vote of that particular locality for some scheming politician. That is certainly not the kind of politics one would wish to become involved in. On the other hand there is no limit to the constructive needs of the country at this time, but, regardless of the merit of the proposition, the first fact an earnest man meets is that one wherein he must trade off his principles, sacrifice something he knows he should retain, merely to see that a worthy object is maintained. Our State is covered with puny, secondary institutions, located at the behest of some ignorant boor, in his locality, not where common sense dictates it should have been located, but often just as far from the conveniences of civilization as greed and selfishness could locate them. All this is due to the fact that honest, intelligent men, the very men who should have assumed leadership, failed in their duty to their country. Hardly an act of our past legislatures can be pointed to except it carries with it the taint of some selfish politician or group of them. Their work was done with no regard whatever for the benefits supposed to be sought in the act, but always, uncovering the "Nigger in the Woodpile" discloses some small pettiness unworthy of the man who solemnly declared to do the best he could for the people of the State, rather than schemingly throttle it by some half-hearted, laughable farce in the way of a state institution to care for the state's need. No, this is not the day to say "I take no interest in politics", on the other hand we are rapidly coming to the place where the slogan "Turn the Rascals out" should be the order of the day. We should not merely swap rascals in mid stream either, but in good faith should assume the proper function which only a great and learned profession may assume in the presence of so much nauseating political maneuvering.

## THE MEDICAL PROTECTIVE ACT

Dr. C. A. Thompson,  
Sec'y. State Medical Association,  
Barnes Bldg.,  
Muskogee, Oklahoma.

Dear Dr. Thompson:

At last, after many years' efforts, Oklahoma has a medical law, which your Committee thinks will compare favorably with that of any other State. Senate Bill 148 was signed by the Governor, March 31st, and is in effect because it carries an emergency clause.

I am taking the liberty of giving you a brief outline of this law. It is too voluminous to give in full. Later it is hoped that it will be prepared in pamphlet form for distribution for the doctors throughout the State.

In the first ten sections, the Board is created and the duties are outlined. The Board consists of nine members chosen from the Regulars, the Eclectics, the Homoeopaths and the Physio-Medics and serve for four years.

Section eleven provides the penalty for practicing medicine without license: The first offense is fined from \$100.00 to \$500.00. Second offense, fine in like amount and a jail sentence of 30 to 180 days. It is well to note that the enforcement of this and all other sections involving misdemeanors is by the County Attorney in the courts of the county. This is as it should be. Local people are more familiar with and more interested in local violations and punishments therefor than some one living in another part of the State. County Medical Societies must look largely after this matter.

Section twelve defines the practice of medicine and is quoted as follows: "Every person shall be regarded as practicing medicine within the meaning and provisions of this act, who shall append to his name the letters "M. D.," "Doctor," "Professor," "Specialist," "Physician," or any other title, letters or designation which represent that such person is a physician, or who shall for a fee or compensation treat disease, injury or deformity of persons by any drugs, surgery, manual or mechanical treatment whatsoever."

This can not, of course, be made to apply to Osteopaths or Chiropractors who have license under those laws, but it does apply

to each and everyone of any cult whatsoever who is not so licensed. There are many of them. Example: The Combina-thists, who have a school (?) down at Ardmore and are turning out drugless healers by the score. Not one is eligible for license in any form in this State and each should be prosecuted. The Magnetic Healer, the Natuero-therapist, the Mechano-therapist and what not, all are covered by the definition. If they continue to ply their trade, it will be due to local lack of interest in prosecution.

Sections thirteen, fourteen and fifteen provide eligibility for license. The applicant must be of good moral character and not addicted to habitual intemperance or the habitual use of habit forming drugs; that he has not been convicted of a felony or any crime involving moral turpitude; he has never been guilty of unprofessional conduct; that his medical license has never been revoked within any other State for cause and that he is not suffering with active tuberculosis or venereal disease and that he is a graduate of a college with the requirements "in no particular less than those prescribed by the Association of American Medical Colleges". This means

a Class A school at the present time.

Section eighteen provides for reciprocity with other States, provided "that the legal requirements of such medical Boards shall have been, at the time of issuing such certificate, in no particular of less degree than those of the Oklahoma Board at the time when the license was issued."

Section twenty provides that the license must be recorded in the office of the County Clerk in the County where office is located and that the County Clerk must so notify the Secretary of the Board of Examiners. The fine for failure to so record his license, subjects the Doctor to a fine of \$25.00 to \$100.00 for each day.

Sections twenty-three to twenty-eight provide for revocation of a license for acts of unprofessional conduct and outlines the procedure. The State is made a party to the charges and the Attorney General is made the prosecutor.

Section twenty-nine defines unprofessional conduct and is quoted in full as follows: "FIRST. Procuring, aiding or abetting a criminal operation or abortion. SECOND. Advertising in any manner, either in his own name or under the name of any person, firm, association or corporation, in any

newspaper, pamphlet, circular, or other written or printed paper or document, the curing of venereal diseases, the restoration of "lost manhood", the treatment and curing of private diseases peculiar to men and women, or the advertising, or holding himself out to the public, in any manner as a specialist in diseases of the sexual organs, or diseases caused by sexual weakness, self-abuse or excessive indulgences, or in any disease of like nature produced by like causes; or the advertising of any medicine or any means whatever, whereby the monthly periods of women can be restored, or regulated or the menses be re-established, if suppressed, or being employed by or in the service of any person, firm, association or corporation so advertising. THIRD. The obtaining of any fee or offering to accept any fee, present, or other form of remuneration whatsoever, on the assurance or promise that a manifestly incurable disease can or will be cured. FOURTH. Willfully betraying a professional secret to the detriment of the patient. FIFTH. Habitual intemperance or the habitual use of habit-forming drugs. SIXTH. Conviction of a felony or of any offense involving moral turpitude. SEVENTH. The employment of what is commonly known as "cappers" or "steerers" in procuring practice. EIGHTH. All advertising or medical business in which statements are made which are grossly untrue or improbable and calculated to mislead the public. NINTH. Conviction or confession of a crime involving the violation of the anti-narcotic or prohibition laws and regulations of the Federal Government, or the Board of Health laws and regulations of the State of Oklahoma. TENTH. Dishonorable or immoral conduct.

Special attention is called to second and ninth paragraphs as being entirely new.

Section Thirty is new and is quoted in full as follows: "It shall be the duty of all firms, associations, or corporations engaged in the practice of medicine within the meaning of the Act, within the State of Oklahoma, under whatsoever name or designation, before entering the practice thereof, to report in writing to the County Clerk of the county in which such business is to be conducted, the name and addresses of all physicians connected therewith who propose to practice medicine and surgery under such name or designation, or in connection therewith, within said county and

State; and from time to time thereafter such additional names and addresses as may be added thereto for the purpose of engaging in such practice under such firm name and designation, shall be so reported; provided, that nothing in this Section shall operate or be construed to waive the requirements that each and every member of such firm, association or corporation so practicing medicine and surgery thereunder, shall be duly licensed to practice medicine and surgery in the State of Oklahoma. Any firm, association or corporation, or any member or agent thereof, violating any of the provisions of this Section, shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not to exceed One Hundred (\$100.00) Dollars, and each day's practice shall be deemed a separate offense."

This section is designed to apply to advertising traveling specialists who have only a day or two in a place and usually under some high sounding firm name. It also incidentally applies to reputable firms or clinics as well which could not be excepted without discrimination which would have rendered the section unconstitutional.

The Board meets on second Tuesday and Wednesday in January, April, July, and October. The following fees are provided: For examination, \$25.00; for Reciprocity, \$100.00; for Duplicate license, \$15.00; for reissuing Territorial license, \$15.00; for Endorsement of reciprocity to other States, \$10.00.

In closing, I wish to say that much time has been spent in and about the Legislature during this session and progress seemed slow and uncertain. But for the timely aid of State Commissioner of Health, Dr. A. E. Davenport, we perhaps would not have succeeded. Dr. Davenport gave much personal efforts in the Lower House and the State Medical Association is under lasting obligation to him.

Trusting that this will give the desired information, I beg to remain,

Yours truly,

J. M. Byrum,

Sec'y. State Board of Medical Examiners.

### *Editorial Notes—Personal and General*

Dr. A. W. Harris, Muskogee, visited Chicago Clinics in April.

Dr. and Mrs. T. D. Palmer, Elk City, visited New Mexico in April.

Dr. R. H. Gibson has been appointed City physician at Ponca City.

Dr. and Mrs. Carey W. Townsend, Oklahoma City, visited San Antonio in March.

Dr. G. W. Jobe, Wagoner, has been appointed medical examiner for the Veterans Bureau.

Dr. O. J. Colwick, Durant, has been appointed on the State Board of Medical Examiners.

Dr. Thomas T. Matlock, Carmen, with his family are touring California and other western states.

Dr. C. M. Maupin, Waurika, has been appointed surgeon for the Wichita Falls and Oklahoma Railroad.

Dr. D. Armstrong, Durant, is luckier than some men. His stolen Ford was found where it had been abandoned by the thief.

Dr. Floyd E. Watterfield, Muskogee, will attend the American Urological Association, which meets in Rochester, May 21, 22, 23.

Dr. Floyd J. Bolend, Oklahoma City, who holds the rank of Lieutenant Colonel will have command of the new medical regiment of the Oklahoma National Guard.

Dr. and Mrs. John W. Riley, Oklahoma City, returned from their visit to the Rio Janiero Exposition. While on the trip they also visited many Central American Countries.

Dr. V. C. Tisdal, Elk City, laid aside his professional work long enough to be a boy again, when, in company with several friends he indulged in an old fashioned fox hunt near Coalgate.

Medical Reserve Appointments for the 95th Division have been announced as follows: Drs. Wann Lankston, Horace Reed, Lea A. Riely, Majors; Dr. L. M. Sackett, Captain. Dr. LeRoy Long was promoted from Major to a Lieutenant Colonelcy.

Kay County physicians held a meeting at Blackwell April 17. The out-of-town guest of honor and principal speaker of the occasion was Dr. L. J. Moorman, Oklahoma City. A dinner was a part of the "entertainment" always finding the doctor thoroughly at home.

Congressman J. Elmer Thomas, Medicine Park, has thrown a fair sized hand grenade into the Veterans Bureau, Washington, by demanding an investigation of treatment accorded ex-soldiers at Fort McKenzie, Wyoming. It is being very generally conceded that there is room for some slight improvement in the management of this huge affair, in fact, it is said that if any corporation caught its executives handling their business as the Bureau's affairs are often handled there would be a few vacancies in and somebody would be again job hunting.

Woods County Medical Society held its bi-monthly meeting at Dacoma March 27th. Dr. H. B. Ames, Alva, held a clinic, also reading a paper on

"Mycosis." Dr. O. E. Templin, Alva, read a paper on "The Doctor Business and Business." Dr. S. N. Mayberry, Enid, read a paper on "The Evolution of Medicine." After the meeting a banquet was tendered the visitors. Dr. G. N. Bilby, Alva, responding to "Holding Your Own," Dr. A. E. Hale, Alva, "Am I A Story Teller?" Dr. W. S. Cherry, Alva, "The Way to Do Business." Dr. S. N. Mayberry wound up the festivities with "The Troubles of Brigham Young," after which the meeting adjourned to the residence of Dr. and Mrs. S. H. Welch, to "listen in" on the radio.

Tulsa County Medical Society, April 9, heard a paper by Dr. P. N. Charbonnet on "The Insufflation Test as a Diagnostic and Therapeutic Agent in Sterility" and one Dr. Walter Huber on "Industrial Ophthalmology." Drs. A. S. Ganett, formerly from Saskatchewan and F. T. Underwood, of Chatham, Georgia, were elected to membership. The society moved to subscribe for and have placed copies of "Hygeia" in the various public reading rooms of Tulsa.

Tulsa will see to it that wives and sweethearts of visiting physicians will be handsomely entertained during the Annual meeting. Mrs. G. A. Wall is Chairman and Mrs. Hubert W. Callahan, Secretary of the Women's General Committee, having that matter in charge.

National Hospital day, May 12, will be observed throughout Oklahoma, according to Dr. Fred S. Clinton, State Chairman. He has announced the following committee to stimulate interest in the work:

Dr. A. L. Blesh, Dr. John W. Riley and Dr. LeRoy Long, Oklahoma City; Dr. Hugh Scott, Dr. Claude Thompson, Dr. H. T. Ballantine and Dr. Will Patton Fite, Muskogee; Dr. McLain Rogers, Clinton; Dr. A. S. Risser, Blackwell; Dr. Walter Hardy, Ardmore; Dr. T. M. Aderhold, El Reno; and Dr. Frank W. McGregor, Mangum.

Muskogee County Medical Society was presented a rare treat on the occasion of Pasteur's Centenary, held at the Hotel Severs, Muskogee, May 9. After a banquet Dr. Hugh Scott, Superintendent of the Soldiers' Hospital, facetiously designating himself as the "Pilot" of that institution, because he was kept busy sorting out and "piling" the \$300,000 and some odd dollars worth of equipment which is rapidly being installed, wherever he could find space to put it; invited all physicians to visit the plant, which is rightfully Oklahoma's pride, considered from the hospital standpoint. Dr. Scott intimated the magnitude of the work when he estimated that he would have nearly two hundred employees of all classes when the personnel was complete. Dr. Ralph V. Smith, Tulsa, president-elect of the State Medical Association was present and tendered the meeting his cordial greeting to be present at the Tulsa Meeting in May. The speaker of the evening, Dr. LeRoy Long, Dean of the Medical Department, Oklahoma City, most eloquently sketched the career and work of Pasteur. Perhaps no speaker in the medical profession of our country excels Dr. Long in eloquence or information and his natural enthusiasm and earnestness held his audience to the closest attention. At the conclusion of his address he was warmly congratulated by his hearers and on motion of the President, Dr. Floyd E. Watterfield, he was given a rising vote of thanks for his appearance on the program. About forty physicians were present.

**Official Call to the Officers, Fellows and Members of the American Medical Association.**

The seventy-fourth annual session of the American Medical Association will be held in San Francisco, California, from Monday, June the twenty-fifth to Friday, June the twenty-ninth, Nineteen hundred and twenty-three.

The House of Delegates will convene on Monday, June the twenty-fifth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June the twenty-sixth at 8 P. M.

The various sections of the Scientific Assembly will meet Wednesday, June the twenty-seventh at 9 A. M. and at 2 P. M. and subsequently according to their respective programs.

Attest: G. E. de Schweinitz, President  
Olin West, Secretary Frederick C. Warnshuis,  
Chicago, Ill., April 5 Speaker, House of Delegates

### NOTICE

The Salt Lake County Medical Society is arranging for the entertainment of visitors who may be able to stop over enroute, either going to or coming from the meeting at San Francisco. The stop-over here can be made inexpensive. Our Society has already appointed committees to greet and assist in making arrangements to see the city and, if possible, some of the surrounding territory, which may include wonderful mountain drives; a visit to Saltair, which is situated on Great Salt Lake; and a visit to the great copper mines in this vicinity.

Large parties intending to make this stopover are requested to give us notice as far in advance as possible as to the number in party and length of time of stopover. Any inquiries relative to this matter may be directed to Secretary Dr. Floyd F. Hatch, Deseret Bank Building, Salt Lake City, Utah.

### *Abstracts, Observations from Current Medical Literature*

#### CAFFEIN INTRAVENOUSLY—THE BEST OF STIMULANTS

Caffein, as a temporary stimulant given intravenously, is the one and only drug which in the experience of W. W. Duke, Kansas City, Mo. (Journal A. M. A., April 7, 1923), never completely fails. If given subcutaneously, however, it fails as do other stimulants. He reports the case of an old man with bronchopneumonia who suddenly took a turn for the worse and became apparently moribund. He was practically pulseless. Breathing was of the Cheyne-Stokes type and labored during the periods of dyspnea. Large, coarse, tracheal rales were audible throughout the ward, owing to accumulation of mucus in the trachea. The patient had been given strychnin, atropin, camphorated oil and strophanthin

intravenously, and had shown no response to them whatever. Duke then gave 2 grains of caffein sodiobenzoate intravenously. The patient opened his eyes almost immediately and began to talk. He began to breathe regularly and deeply, and was troubled no further with mucus in the trachea. The pulse became strong and regular. This lasted until the following night, when he again lapsed into the state described and passed away, this time in spite of further use of caffein. This experience has been repeated many times by Duke with almost equally good temporary results. The drug has been used in moribund cardiorenal cases; in uremia associated with coma; in prostate cases with ascending infection; in uremia and coma; in bronchopneumonia with coma, and in general sepsis with coma. The result in the majority of cases has been temporary, and while the drug has often been repeated two or three times with good effect, the later doses have rarely been as effective as the first. In one case, however, caffein was repeatedly used with the result that the patient recovered from an illness which Duke is convinced otherwise would have almost certainly terminated fatally.

#### THE SCOPE OF THE ROENTGENOLOGIST'S REPORT

In the opinion of Charles D. Enfield, Louisville, Ky. (Journal A. M. A., April 7, 1923), the ideal roentgen-ray report should present a careful and accurate description of the picture seen. It should offer whatever explanation of variations from the normal that may be conservatively given on a basis of established roentgen pathology. It should give, when this can be conservatively done, an estimate of the activity and present importance of the lesion, such estimate, however, to be derived entirely from the roentgen signs. It should place in the hands of the clinician all the information the roentgenologist has been able to obtain by his peculiar method of examination, and should offer it in such form as will most facilitate the correlation of the roentgen and clinical evidence.

## A BIOLOGIC MECHANISM OF HUMAN ISOHEMAGGLUTINATION

The hypothesis that there are two agglutinogens and two agglutinins responsible for the serologic behavior of the four groups of human blood, in the opinion of Manuel G. Gichner, Baltimore (Journal A. M. A., Dec. 23, 1922), is in complete agreement with the results of the absorption of agglutinin from the serum of the several groups, and of the saturation of the agglutininogen of the cells of the several groups, as demonstrated by Koeckert. The hypothesis that the presence of the agglutinogens is always dominant and their absence always recessive rests on observations on 885 individuals constituting 191 families. The hypothesis that the inheritance of the human iso-agglutinogens follows the mendelian formula for a dihybrid rests on: (a) The existence of two different unit characters. (b) The occurrence in nature of all the genotypes to be expected from a dihybrid mating. (c) The occurrence of the phenotypes (blood groups) in the numerical proportion expected for the matings of the several genotypes. The position of Buchanan arises from his failure to interpret properly the facts in relation to the mechanism of human isohemagglutination and the inheritance of the iso-agglutinogens.

## SEASONAL HAY-FEVER

Autumnal hay-fever is quite common in northern Texas, while vernal cases are rare. In autumnal cases studied by J. H. Black and Annette Black, Dallas, Texas (Journal A. M. A., Dec. 23, 1922), the patients have, without exception, reacted to ragweed. No case due to grass pollens (except corn) has been seen. Onset and duration of autumnal attacks corresponds to pollination time of ragweed, extending from about August 20 to October 10. Sixty per cent. of all cases seen showed multiple sensitization; 49 per cent. were sensitive only to members of the same botanical group. No patients were treated with combined pollen. When multiple sensitization was found in autumnal cases, ragweed pollen was used. The intradermal method of testing proved more dependable than the scratch method. Best results were obtained from treatment when doses were given at a four-day interval. Treatment should not be discontinued before the beginning of the season. Better results probably follow when treatment is continued through the season. Patients given 1:100 pollen ob-

tained somewhat better results than those stopping with smaller dosage. Reactions, local or general, are infrequent if the dosage is carefully graduated. Seasonal treatment alone was not used. In 65.8 per cent. of all autumnal cases, there was more than 50 per cent. improvement; and in 15.2 per cent. more than 75 per cent. relief from symptoms was claimed. No complete cure was obtained.

## HOMIOPLASTIC AND HETEROPLASTIC TUMOR GRAFTS IN THE BRAIN

James B. Murphy and Ernest Sturm, New York (Journal A. M. A., Dec. 23, 1922), assert that heteroplastic tumor tissue will grow readily when inoculated into the cerebrum, provided the graft does not come in contact with the ventricle. The tumors grow rapidly in the brain substance, with no cellular reaction taking place about them. However, when such grafts come in contact with the ventricle, a cellular reaction results, similar to that observed about a subcutaneous heteroplastic graft. A bit of the animal's own spleen inoculated into the brain, along with the heteroplastic tumor issue, prevents the growth of the foreign cells. This action is absent when the spleen is derived from another animal, even of the same species. Mice highly resistant to subcutaneous transplants of mouse tumor give no evidence of this resistance when the tumor is inoculated into the brain.

## ESSENTIAL VASCULAR HYPERTENSION

There are three prominent factors says Joseph H. Barach, Pittsburgh (Journal A. M. A., Dec. 23, 1922), in the etiology of most of the cases of essential vascular hypertension: heredity, infection and endocrine disturbance. These factors affect the male and the female differently. In the male, cases of essential hypertension give a history of an inherited tendency, systemic infection, neurocirculatory asthenia and vascular hypertension after middle life. In the female, there is a history of heredity, infection and endocrine disturbances involving the thyroid and generative system; and there is a tendency to dysthyroidism, sterility and vascular hypertension at the menopause and thereafter. The course and sequelae of essential vascular hypertension will be determined by the organ inferiority of the individual. The organ is determined by heredity, previous infection and strain.

## THIRTY-FIRST ANNUAL MEETING, PRELIMINARY PROGRAM

Tulsa, May 15, 16, 17. Municipal Building. Registration and Exhibits, School Building, 306 South Cincinnati Street.

**Registration:** Will be from rolls made up from county society reports, so, unless you have a 1923 certificate, which places you in good standing for the year you cannot be registered. In case of error, which sometimes occurs despite every effort to prevent, you will save the time of everyone concerned by taking the matter up with the Secretary, who will have a desk near the registration. It is urgently requested that every person intending to attend this meeting dispose of the matter of belated reinstatement now rather than take up the time of those who will have every moment engaged with the work of the meeting. The remittance files of the county secretaries are conclusive and the only criterion governing in this work.

**Papers:** Should be prepared in duplicate. If you are to read a paper at this meeting it is even better to prepare it in triplicate, sending the physician who is designated to open discussion on it a copy, reserving one for yourself and one for the section secretary. At all events do not carry your paper home with you "for corrections". This invariably demands a long drawn out, unnecessary correspondence, delay, publication sometimes out of turn and occasionally total loss of the paper. The person discussing your paper cannot do it justice without some idea as to its scope and contents, hence it is better to do him the courtesy of mailing him a copy in advance, rather than have it possibly indifferently handled. The paper you read is the property of your Association and its JOURNAL. While it is very generally understood to be a breach of propriety to offer it to other Journals for publication as well as to your own JOURNAL, nevertheless this occasionally occurs through thoughtlessness on the part of the author. It is requested that this matter be borne in mind and that your paper be placed where it rightfully belongs, with the records of your Association, and at the time of the Annual Meeting.

THE COUNCIL will meet at 12:00 (noon) in the parlor, or other convenient place of the Ketchum Hotel. All matters pertaining to the business and routine work of the Association should be presented to the Council and not to the House of Delegates, which will have no time to consider such matters during the few hours of its meetings.

HOUSE OF DELEGATES will meet at 1:30 p. m. in the auditorium of the Municipal Building. It is requested that everyone holding membership in the House be there promptly on that hour, for its business must be expedited as rapidly as possible in order not to interfere with the work of the sections, which will all begin simultaneously at 2:30 p. m.

SCIENTIFIC SECTIONS will be opened by their respective chairmen at 2:30 p. m. Tuesday, May 15. They will all be held either in the Municipal Building or the school building adjacent to it. The work of these sections must be concluded in a few hours, so, it is requested that authors and attendants repair promptly to the place of the section they propose attending without delay. If everyone will cooperate in this work our meeting will be what has been predicted for it, a success.

CLINICS. Will be held beginning at 8 a. m.,

Tuesday, May 15th at the following hospitals: Oklahoma Hospital, Morningside Hospital, Tulsa Hospital and Physicians and Surgeons Hospital. Tuesday's and Thursday's clinics will be in charge of Drs. G. H. Butler and Q. R. Atchley; Those of Wednesday will be in charge of Drs. Fred S. Clinton and L. H. Carleton.

THE TELEPHONE number at the registration office will be Osage 2062. Physicians desiring to have anyone communicate with them should leave this number with the home office rather than risk the delay incident to transmission by various hotels and individual physicians. Such mail and telegraphic messages as may arrive may be had by calling at the registration office.

Physicians of Tulsa propose to give the visitor a hurried trip over their city in such manner as they will be able to see as much of the things of interest as possible in the time allotted.

THE GENERAL MEETING will be held on the evening of May 15th at which time the President's address, with addresses of welcome, etc., will also be heard. In conjunction with this meeting the program of the Hospital's Committee will be rendered.

### TO THE LADIES OF THE ENTERTAINMENT COMMITTEE

At a recent meeting of the members of the Entertainment Committee of the Oklahoma State Medical Association, you were selected as one to assist in making the stay of the wives of our visiting physicians pleasant and interesting. Mrs. Wall has been asked, and has accepted the chairmanship of the committee. Mrs. Wall has communicated with some of you already in developing plans for the entertainment of our guests, and we trust you will co-operate in every way in assisting in the work as planned by the committee.

Yours truly,  
FRED Y. CRONK,  
General Chairman Committees.

### ENTERTAINMENT COMMITTEE:

Mrs. G. A. Wall, Chairman.  
Mrs. Herbert W. Callahan.  
Mrs. Fred S. Clinton.  
Mrs. Fred Y. Cronk.  
Mrs. Roy W. Dunlap.  
Mrs. Arthur V. Emerson.  
Mrs. Chas. H. Haralson.  
Mrs. Chas. D. Johnson.  
Mrs. H. D. Murdock.  
Mrs. N. W. Mayginnis.  
Mrs. A. W. Roth.  
Mrs. Ralph V. Smith.  
Mrs. W. J. Trainor.  
Mrs. A. Ray Wiley.

PHI BETA PI. This professional medical organization will give a dinner to its members and guests at 6:00 P. M. Wednesday, May 16. Dr. Ralph V. Smith, president-elect will act as toastmaster. Among the guests of honor will be Dr. Jabez N. Jackson, Kansas City, Missouri, one of Oklahoma's oldest friends among the men inter-

sted in furthering the interests of organized medicine. All members are requested to at once communicate with Dr. Claude B. Norris, Secretary, 401 Patterson Building, Oklahoma City, in order to make the necessary reservations for the dinner. The men in charge promise a short, snappy, entertaining program and those who intend to attend are assured that the affair will be one very much worth while. Reservations should be made now and not postponed until the eleventh hour when it will be too late and cause those in charge unnecessary trouble.

#### SECTION ON PEDIATRICS AND OBSTETRICS

Dr. T. C. Sanders, Chairman, Shawnee.

Dr. George R. Osborn, Secretary, Tulsa.

Dr. Lee Dorsett, St. Louis, Mo., Invited Guest of the Section.

Chairman's Address—

1. "Lactation Amenorrhea,"—Dr. D. M. McDonald, Tulsa.  
Discussion opened by Dr. C. D. F. O'Hern, Tulsa.  
Continued by Dr. E. T. Robinson, Cleveland.
2. "Summer Diarrheas in Infants and Children,"—Dr. Carroll M. Pounders, Oklahoma City.  
Discussion opened by Dr. C. V. Rice, Muskogee.  
Continued by Dr. Catherine Brydia, Ada.
3. "The Management of Abortions,"—Dr. A. C. Hirshfield, Oklahoma City.  
Discussion opened by Dr. G. E. Stanbro, Pawhuska.  
Continued by Dr. J. A. Hatchett, Oklahoma City.
4. "Prevention of Diseases in Infancy and Early Childhood,"—Dr. C. V. Rice, Muskogee.  
Discussion opened by Dr. A. L. Soloman, Oklahoma City.  
Continued by Dr. C. E. Bradley, Tulsa.
5. "Intestinal Obstruction in Children,"—Dr. E. E. Rice, Shawnee.  
Discussion opened by Dr. W. M. Taylor, Oklahoma City.  
Continued by Dr. F. A. Anderson, Claremore.
6. "Internal Podalic Version: Personal Experience with the Potter Method,"—Dr. Lee Dorsett, St. Louis, Mo.  
Discussion opened by Dr. W. W. Wells, Oklahoma City.  
Continued by Dr. A. C. Hirshfield, Oklahoma City.
7. "A Plea for a Better Understanding and the Courage To Do in the Treatment of Laryngeal Diphtheria,"—Dr. J. E. Hughes, Shawnee.  
Discussion opened by Dr. W. C. Vernon, Okmulgee.  
Continued by Dr. C. S. Bobo, Norman.
8. "Episiotomy,"—Dr. W. W. Wells, Oklahoma City.  
Discussion opened by Dr. Geo. R. Osborn, Tulsa.  
Continued by Dr. J. Winter Brown, Tulsa.
9. "Primary Acidosis as Seen in Infants!"—Dr.

Nevin J. Dieffenbach, Tulsa.

Discussion opened by Dr. M. P. Springer, Tulsa.

Continued by Dr. C. E. Bradley, Tulsa.

10. "Anesthesia and Analgesia in Obstetrics,"—Dr. L. C. Presson, Tulsa.  
Discussion opened by Dr. Bertha Magolin, Tulsa.  
Continued by Dr. Paul Geissler, Tulsa.
11. "Importance of Proper Food After Weaning,"—Dr. Carl Puckett, Pryor.  
Discussion opened by Dr. H. M. Williams, Oklahoma City.  
Continued by Dr. W. A. Howard, Chelsea.

#### SECTION ON GENITO-URINARY, SKIN DISEASES AND RADIOLOGY

Dr. C. H. Ball, Chairman, Tulsa.

Dr. J. Z. Mraz, Secretary, Oklahoma City.

Chairman's Address—"Some Dermatological and Radiological Observations."

1. "X-Ray Treatment of Thyroids,"—Dr. O. H. McCandless, Kansas City, Mo.  
Discussion opened by Dr. J. W. Craig, Vinita, Okla.
2. "Diseases of the Urethra in the Female,"—Dr. R. S. Love, Oklahoma City.  
Discussion opened by Dr. J. S. Hooper, Tulsa.
3. "External Fungus Infections,"—Dr. E. S. Lain, Oklahoma City.  
Discussion opened by Dr. A. L. Stocks, Muskogee, Okla.
4. "Treatment of Renal Stone," with lantern slide illustrations—Dr. W. J. Wallace, Oklahoma City.  
Discussion opened by Dr. J. W. Rogers, Tulsa, Okla.
5. "Combination of X-Ray and Radium Therapy in Superficial Malignancies About the Face,"—Dr. S. D. Neely, Muskogee.  
Discussion opened by Dr. E. S. Lain, Oklahoma City, Okla.
6. "Report of Clinical Findings on a Pathogenic Pseudo Gonococcus,"—Dr. Rex Bolend, Oklahoma City, Okla.  
Discussion opened by Dr. W. H. Bailey, Oklahoma City.
7. "A Peculiar Foot Condition,"—Dr. C. D. Blachly, Drumright.  
Discussion opened by Dr. C. J. Fishman, Oklahoma City.
8. "Cancer of the Prostate,"—Dr. J. Hoy Sanford, St. Louis, Mo.  
Discussion opened by Dr. E. L. Cohenour, Tulsa.
9. "Anomalous X-Ray Cases,"—Dr. Leon H. Stuart, Tulsa.  
Discussion opened by Dr. J. E. Heatley, Oklahoma City.
10. "An experimental Study of Ureteral Transplantation Into the Bowel," with lantern slide illustrations—Dr. A. I. Folsom, Dallas, Texas.  
Discussion opened by.....
11. "Salient Points in Dermatological Diagnoses,"—Dr. C. J. Woods, Tulsa.  
Discussion opened by Dr. M. M. Roland, Oklahoma City.
12. "Tumors of the Bladder,"—Dr. J. H. Hays, Enid, Okla.  
Discussion opened by Dr. C. R. Day, Okla-

homa City.

13. "Treatment of Inflammatory Conditions of the Seminal Vesicles and Prostate Gland,"—Dr. Frank J. Baum, McAlester, Okla.  
Discussion opened by Dr. E. S. Sullivan, Oklahoma City.

#### SECTION OF EYE, EAR, NOSE AND THROAT Dr. W. T. Salmon, Chairman, Oklahoma City.

Chairman's Address—

1. "Industrial Ophthalmology,"—Dr. W. A. Huber, Tulsa.  
Discussion opened by Dr. Chas. A. Haralson, Tulsa.
2. "Report of a Case of Sympathetic Inflammation,"—Dr. L. A. Newton, Oklahoma City.  
Discussion opened by Dr. G. E. Hartshorn, Tulsa.
3. "Report of a Case of Recurrence of the Faucial Tonsils After Removal,"—Dr. Thos. R. Lutzer, Lawton.  
Discussion opened by Dr. W. Albert Cook, Tulsa.
4. "Case Report of a Foreign Body Within the Crystalline Lense,"—Dr. W. W. Gallaher, Shawnee.  
Discussion opened by Dr. Milton K. Thompson, Muskogee.
5. Paper—"Case Report of Eye Injuries,"—Dr. J. C. McDonald, Oklahoma City.  
Discussion opened by Dr. L. M. Westfall, Oklahoma City.
6. "Adenoids and Their End Results,"—Dr. H. P. Price, Tulsa.  
Discussion opened by Dr. Ruric N. Smith, Tulsa.
7. "Pulmonary Abscess as a Sequel to Tonsillectomy,"—Dr. H. Coulter Todd, Oklahoma City.  
Discussion opened by Dr. E. S. Fergusson, Oklahoma City.
8. "Acute Middle Ear—Importance of Early Drainage,"—Dr. T. W. Stalling, Tulsa.  
Discussion opened by Dr. Green, Bartlesville.

#### SECTION ON GENERAL MEDICINE NEUROLOGY, PATHOLOGY, AND BACTERIOLOGY

H. T. Ballantine, Chairman, Muskogee, Okla.  
Gayfree Ellison, Secretary, Norman, Okla.

Chairman's Address—"The Forward Look in Medicine."

1. "Coronary Sclerosis,"—Otis S. Warr, Memphis, Tenn.  
Discussion opened by Dr. Fred J. Wilkie-meyer, Muskogee, Okla.
2. "Diagnosis and Treatment of Various Forms of Hay Fever,"—Ray M. Balyeat, Oklahoma City, Okla.  
Discussion opened by Dr. Sam Goodman, Tulsa, Okla.
3. "Bichloride Poisoning,"—Dr. D. O. Smith, Tulsa, Okla.  
Discussion opened by Dr. R. F. Terrill, Stigler.
4. "Food Infections,"—Dr. Gayfree Ellison, Norman, Okla.  
Discussions opened by Dr. J. L. Day, Norman.

5. "Intestinal Perforation in Typhoid Fever,"—Dr. T. H. McCarley, McAlester, Okla.  
Discussion opened by Dr. H. A. Scott, Muskogee, Okla.
6. "Neuroses and the Internal Secretions,"—Dr. M. Q. Howard, Oklahoma City, Okla.  
Discussion opened by Dr. A. D. Young, Oklahoma City, Okla.
7. "Pseudo Intestinal Obstruction,"—Dr. H. Lee Farris, Tulsa, Okla.  
Discussion opened by Dr. D. O. Smith, Tulsa, Okla.
8. "Early Diagnosis of Pulmonary Tuberculosis,"—Dr. Ellis Lamb, Clinton, Okla.  
Discussion opened by Dr. L. J. Moorman, Oklahoma City, Okla.
9. "Diagnosis and Prevention of Rabies,"—Dr. T. A. Hartgraves, Okmulgee, Okla.  
Discussion opened by Dr. Johnson Anderson, Muskogee, Okla.
10. "Certain Pulmonary and Pleural Sequelae of Respiratory and Other Infections," with lantern slides—Dr. Walter Baumgarten, St. Louis, Mo.  
Discussion opened by Dr. H. C. Rogers, Muskogee.
11. "Syphilis of the Alimentary Tract,"—Dr. D. D. Paulus, Oklahoma City, Okla.  
Discussion opened by J. M. Postelle, Oklahoma City, Okla.
12. "Diseases of the Liver,"—Dr. Chas. W. Heitzman, Muskogee, Okla.  
Discussion opened by Dr. J. C. Peden, Tulsa, Okla.
13. "Bronchial Asthma,"—Dr. M. D. Carnell, Okmulgee, Okla.  
Discussion opened by Dr. J. M. Watson, Enid, Okla.
14. "The Parkinsonian Syndrome Following Encephalitis,"—Dr. A. D. Young, Oklahoma City, Okla.  
Discussion opened by Dr. Lea Riley, Oklahoma City, Okla.
15. "Some Unusual Complications of Influenza,"—Dr. H. M. Williams, Oklahoma City, Okla.  
Discussion opened by Carl Puckett, Pryor.
16. "Some Observations on Pneumonia Following Influenza,"—Dr. G. L. Johnson, Pauls Valley, Okla.  
Discussion opened by P. L. Hayes, Vinita.
17. "A New Treatment in Pneumonia,"—L. A. Mitchell, Frederick.  
Discussion opened by Dr. Geo. W. West, Eufaula.
18. Symposium on "Diabetes."
  1. The History and Etiology of Diabetes.  
By E. L. Yeakel, M. D., Shawnee, Okla.
  2. Pathological Anatomy of the Pancreas in Diabetes.  
By G. O. Hartman, M. D., Enid, Okla.
  3. Deranged Metabolism in Diabetes.  
By Wm. H. Bailey, A. B., M. D., Oklahoma City, Okla.
  4. Treatment of Diabetes from a Metabolistic Basis.  
By Wann Langston, M. D., Oklahoma City, Okla.

## SECTION ON SURGERY AND GYNECOLOGY

W. P. Fite, Chairman, Muskogee.

Tuesday afternoon, May 15th, 1923.

Chairman's Address—

"Radium as an Adjunct in Uterine Conditions,"—Dr. W. P. Fite, Muskogee, Okla.

Discussion—Dr. M. E. Stout, Oklahoma City, Oklahoma; Dr. S. D. Neely, Muskogee, Oklahoma.

1. "Insufflation Test as a Diagnostic and Therapeutic Agent in Sterility,"—Dr. P. N. Charbonnet, Tulsa, Oklahoma.

Discussion—Dr. George R. Osborne, Tulsa, Oklahoma; Dr. Dick Lowry, Oklahoma City, Oklahoma.

2. "A Point in the Constitutional Treatment of Delayed Recovery of Open Fractures,"—Dr. Fred S. Clinton, Tulsa, Oklahoma.

Discussion—Dr. C. M. Rosser, Dallas, Texas;

3. "The Management of Some of the Common Fractures,"—Dr. W. K. West, Oklahoma City, Oklahoma.

Discussion—Dr. Roscoe Walker, Pawhuska, Oklahoma; Dr. J. M. Bonham, Hobart, Oklahoma.

4. "Evolution in Medicine,"—Dr. S. N. Mayberry, Enid, Oklahoma.

Discussion—Dr. A. L. Blesh, Oklahoma City, Oklahoma; Dr. W. G. Lemon, Tulsa, Oklahoma.

Wednesday Afternoon, May 16th, 1923.

5. "Fracture of the Skull, Diagnosis and Treatment,"—Dr. Fred S. Watson, Okmulgee, Oklahoma.

Discussion—Dr. I. W. Bollinger, Henryetta, Oklahoma; Dr. J. H. White, Muskogee, Oklahoma.

6. "The Diagnosis and Treatment of Trifacial Neuralgia,"—Dr. A. W. Adson, Rochester, Minnesota.

Discussion—Dr. Antonio D. Young, Oklahoma City, Oklahoma; Dr. Robert M. Howard, Oklahoma City, Oklahoma.

7. "Some Phases of Brain Surgery,"—Dr. G. S. Baxter, Shawnee, Oklahoma.

Discussion—Dr. F. L. Carson, Shawnee, Oklahoma; Dr. McLain Rogers, Clinton, Oklahoma.

8. "The Use of Skin Flaps in Facial Surgery,"—Dr. Curt von Wedel, Oklahoma City, Okla.

Discussion—Dr. A. S. Risser, Blackwell, Oklahoma; Dr. John W. Riley, Oklahoma City, Oklahoma.

9. "Why Not a Pre-Employment Inspection of Employees,"—Dr. Fred Y. Cronk, Tulsa, Oklahoma.

Discussion—Dr. Horace Reed, Oklahoma City; Dr. A. Ray Wiley, Tulsa, Oklahoma.

10. "Malignant Edema,"—Dr. Dan W. Gray, Guthrie, Oklahoma.

Discussion—Dr. J. C. Ross, Woodward, Oklahoma; Dr. L. A. Hahn, Guthrie, Oklahoma.

Thursday Afternoon, May 17th, 1923.

11. "Suppurative Appendicitis,"—Dr. E. B. Dunlap, Lawton, Oklahoma.

Discussion—Dr. John F. Kuhn, Oklahoma City, Oklahoma.

12. "The Traumatic Abdomen,"—Dr. I. B. Oldham, Muskogee, Oklahoma.

Discussion—Dr. P. P. Nesbitt, Muskogee, Oklahoma; Dr. Leroy Long, Oklahoma City, Oklahoma.

13. "Functions of Veterans Bureau Hospitals,"—Col. Hugh Scott, Muskogee, Oklahoma.

Discussion—Dr. Horace Reed, Oklahoma City, Oklahoma; Dr. E. E. Benoist, Tulsa, Oklahoma.

14. "Acute Circumscribed Peritonitis of Metastatic Origin Simulating Appendicitis,"—Dr. C. S. Neer, Vinita, Oklahoma.

Discussion—Dr. Ralph Smith, Tulsa, Oklahoma; Dr. G. A. Wall, Tulsa, Oklahoma.

15. "Acute Pancreatitis,"—Dr. L. H. Carleton, Tulsa, Oklahoma.

Discussion—Dr. J. C. Wagner, Ponca City, Oklahoma.

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JOINT OPEN MEETING OKLAHOMA STATE  
MEDICAL ASSOCIATION AND OKLAHOMA  
STATE HOSPITAL ASSOCIATION

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Tuesday, May 15, 1923, 7:30 P. M., Boston Ave.  
M. E. Church, 5th and Boston

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PROGRAM

Invocation—Rev. John A. Rice.

Music (Selected)—Mrs. E. E. Clulow.

Address of Welcome—Mr. Chas. O'Connor, Chamber of Commerce, City.

Response—Dr. LeRoy Long, Oklahoma City, Oklahoma.

Address—Dr. McLain Rogers, Pres., Oklahoma State Medical Assn., Clinton, Okla.

Introduction of President-elect, Dr. Ralph V. Smith.

Music (Selected)—Mrs. H. J. Mugge, Tulsa, Okla.

Address—Dr. C. M. Rosser, Dallas, Texas.

Violin Solo—Esther Roe, Tulsa, Okla.

Address—Mr. Robert Jolly, Supt., Baptist Hospital, Houston, Texas.

## CONDENSED PROGRAM

Oklahoma State Medical Association  
May 15-16-17, 1923  
Tulsa, Oklahoma

### Tuesday, May 15

- 9 to 11 A. M. Clinics at various hospitals.
- Registration: Physicians at Board of Education Building, 306 South Cincinnati (Follow the arrow). Hotel accommodation may be arranged for at registration bureau, but should be secured prior to meeting.
- Registration: Visiting ladies—Hotel Tulsa.
- 1:30 P. M. Meeting of the House of Delegates—Municipal Building.
- 2:00 P. M. Scientific program—Municipal Bldg., 4th and Cincinnati.
- 2:00 P. M. Theater party for visiting ladies.
- 7:30 P. M. Boston Avenue M. E. Church, 5th and Boston.
- Open Meeting.
- MEDICAL SECTION—
- Dr. McLain Rogers, presiding.
- Welcome Address—Charles O'Connor.
- Response—Dr. LeRoy Long.
- President's Address—Dr. Rogers.
- Introduction of President-Elect, Dr. Ralph V. Smith.
- 8:15 P. M. HOSPITAL SECTION.
- Dr. Fred S. Clinton, presiding.

### Wednesday, May 16

- 8:00 A. M. Clinics at various hospitals.
- 10:00 A. M. Scientific program at Municipal Building.
- 12:00 A. M. Inspection of High School: 6th and Cincinnati.
- 1:00 P. M. Luncheon at High School Cafeteria (nominal charge).
- 2:00 P. M. Scientific program.
- 1:00 P. M. Luncheon—Country Club for visiting ladies.
- 3:00 P. M. Sight-seeing tour of Tulsa for visiting ladies.
- 6:00 P. M. Phi Beta Pi Alumni, Hotel Tulsa.
- 7:00 P. M. Motion pictures, Orpheum Theater for doctors and their wives.
- 9:00 P. M. Ball at Elks Hall: Third and Boulder.

### Thursday, May 17

- 8:00 A. M. Clinics at various hospitals.
- Unfinished business for physicians.
- 2:00 P. M. Sight-seeing tour over city and Cosden's refinery.
- 2:00 P. M. Sight-seeing tour over city and Sand Springs.
- 2:00 P. M. Theater party for visiting ladies.

## STANDING COMMITTEES.

**Medical Defense**—Drs. L. S. Willour, Chairman, McAlester; J. H. White, P. P. Nesbitt, C. A. Thompson, Muskogee; McLain Rogers, Clinton.

**Legislative**—Drs. A. K. West, Majestic Bldg., Oklahoma City; J. M. Byrum, Shawnee; McLain Rogers, Clinton; C. A. Thompson, Muskogee.

**Hospitals**—Drs. Fred S. Clinton, Chairman, Oklahoma Hospital, Tulsa; M. Smith, Colcord Bldg., Oklahoma City; C. A. Thompson, 508 Barnes Bldg., Muskogee.

**Medical Education**—Dr. Wann Langston, Chairman, University Hospital, Oklahoma City; Dr. A. B. Chase, Colcord Bldg., Oklahoma City; Dr. W. A. Fowler, Oklahoma City.

**Tuberculosis, Study and Control**—Drs. Leila Andrews, Chairman, Colcord Bldg., Oklahoma City; Horace T. Price, 303 Palace Bldg., Tulsa; C. W. Heitzman, 615 Barnes Bldg., Muskogee.

**Health Problems in Education**—Drs. J. T. Martin, Chairman, 200 W. 14th; J. R. Burdick, Oklahoma City, Okla.; A. S. Risser, Blackwell; Edw. F. Davis, 343 American National Bldg., Oklahoma City.

**Cancer, Study and Control**—Drs. LeRoy Long, Chairman, Colcord Bldg., Oklahoma City; E. S. Lain, Patterson Bldg., Oklahoma City; Gayfree Ellison, State University, Norman; McLain Rogers, Clinton.

**Veneral Disease Control**—Drs. W. J. Wallace, Chairman, 530 American National Bldg., Oklahoma City; Ross Grosshart, Tulsa; J. H. Hayes, Enid.

**Vision, Conservation**—Drs. W. Albert Cook, Chairman, Palace Bldg., Tulsa; D. D. McHenry, Colcord Bldg., Oklahoma City; John R. Walker, Enid.

**Committee on Benefactions**—Drs. L. J. Moorman, Chairman, 1st Nat. Bldg., Oklahoma City; J. H. White, Muskogee; R. V. Smith, Daniel Bldg., Tulsa; L. A. Turley, Norman; McLain Rogers, Clinton.

## COUNCILORS AND THEIR COUNTIES.

**District No. 1.** Texas, Beaver, Cimarron, Harper, Ellis, Woods, Woodward, Alfalfa, Major, Grant, Garfield, Noble and Kay. A. S. Risser, Blackwell. (Term expires 1924.)

**District No. 2.** Dewey, Roger Mills, Custer, Beckham, Washita, Greer, Kiowa, Harmon, Jackson and Tillman. L. A. Mitchell, Frederick. (Term expires 1923.)

**District No. 3.** Blaine, Kingfisher, Canadian, Logan, Payne, Lincoln, Oklahoma, Cleveland, Pottawatomie, Seminole and McClain. Dr. Walter Bradford, Shawnee. (Term expires 1925.)

**District No. 4.** Caddo, Grady, Comanche, Cotton, Stephens, Jefferson, Garvin, Murray, Carter, and Love. J. T. Slover, Sulphur. (Term expires 1923.)

**District No. 5.** Pontotoc, Coal, Johnston, Atoka, Marshall, Bryan, Choctaw, Pushmataha and McCurtain. J. L. Austin, Durant. (Term expires 1925.)

**District No. 6.** Okfuskee, Hughes, Pittsburg, Latimer, LeFlore, Haskell and Sequoyah. L. S. Willour, McAlester. (Term expires 1924.)

**District No. 7.** Pawnee, Osage, Wahsington, Tulsa, Creek, Nowata and Rogers. Chas. H. Ball, Tulsa. (Term expires 1923.)

**District No. 8.** Craig, Ottawa, Delaware, Mayes, Wagoner, Cherokee, Adair, Okmulgee, Muskogee and McIntosh. P. P. Nesbitt, Surety Bldg., Muskogee. (Term expires 1925.)

OFFICERS OKLAHOMA STATE MEDICAL ASSOCIATION  
1922 - 1923

President, 1922-1923, Dr. McLain Rogers, Clinton.  
President-Elect, Dr. Ralph V. Smith, Daniel Bldg., Tulsa.  
First Vice-President, E. S. Ferguson, Oklahoma City.  
Second Vice-President, W. A. Tolleson, Eufaula.  
Third Vice-President, E. B. Dunlap, Lawton.  
Secretary-Treasurer-Editor, Dr. Claude Thompson, 508 Barnes Bldg., Muskogee, Okla.

Associate Editor, Councilor Representative, Dr. P. P. Nesbitt 710 Surety Bldg., Muskogee.

Meeting Place, Tulsa, May 15-16-17, 1923.

Delegates to the A. M. A.: Dr. W. Albert Cook, Palace Bldg. Tulsa (1923-1924); Dr. J. M. Byrum, Shawnee (1922-1923).

## STATE BOARD OF MEDICAL EXAMINERS.

W. E. Sanderson, Altus; W. T. Ray, Gould; O. N. Windle, Sayre; J. E. Farber, Cordell; D. W. Miller, Blackwell; J. M. Byrum, Shawnee, Secretary; J. E. Emanuel, Chickasha.

Reciprocal relations have been established with Missouri, Colorado, New Jersey, California, on basis of examination only. Arkansas, Georgia, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Tennessee, Texas, Vermont, Virginia, Washington, Wisconsin, West Virginia, on basis of a diploma and a license without examination in case the diploma and the license were issued prior to June 12, 1908.

Meetings held on first Tuesday of January, April, July and October, Oklahoma City. Do not address communications concerning State Board examinations, reciprocity, etc., to the Journal or to Dr. C. A. Thompson, Secretary, but to Dr. J. M. Byrum, Shawnee, Secretary of the Board.

## CHAIRMEN OF SCIENTIFIC SECTIONS:

General Medicine, Neurology, Pathology and Bacteriology: Dr. H. T. Ballantine, Muskogee.

Genito-Urinary, Skin and Radiology: Chas. H. Ball, Tulsa, Chairman; Dr. J. Z. Mraz, Oklahoma City, Secretary.

Surgery and Gynecology: Dr. Wm. P. Fite, Muskogee.

Eye, Ear, Nose and Throat: Dr. W. T. Salmon, Chairman, Oklahoma City; Dr. W. E. Dixon, Secretary, Oklahoma City.

Obstetrics and Pediatrics: Dr. T. C. Sanders, Shawnee, Chairman; Dr. George R. Osborne, 302 Daniels Building, Tulsa, Secretary.

## CLASSIFIED ADVERTISEMENTS

Advertising under this heading is charged at the following rates: First insertion, 50c per line; subsequent insertions, 25c per line.

MRS. BENJ. B. BROWN, Muskogee, offers for sale the surgical instruments and appliances of the late Dr. B. H. Brown. They consist of a McKesson (Junior) Anaesthetic appliance, Leitz microscope, sterilizers, and a fine collection of adjuncts necessary to the physician. Write Mrs. Brown, 223 N. 17th, Muskogee.

FOR SALE: \$8000 practice. 2500 County seat school town, with college. \$3500 residence is all that you have to buy. Rich farming country, good collections. Specializing. Address Journal A. S. N.

WANTED: Position as Supt. of Nurses in moderate sized hospital, by Protestant, registered graduate of Class-A school 1908, where efficient painstaking effort will be appreciated. Experienced operating-room assistant. Excellent references from last position. Charlotte E. Rennebaum, 525 North 7th St., Muskogee.

WANTED: To buy an established Eye, Ear, Nose and Throat practice in town of 8000 or 10,000. Give full particulars in first letter. Address, 'Cohay', c-o Journal.

Practically new Campbell Portable X-Ray in carrying cases. Capacity of 30 millis and 5 inch gap. Coolidge tube included. Priced right and terms to responsible party. Dr. James C. Johnston, McAlester, Okla.

Location Wanted: Would like to associate with a group or Clinic. Would specialize. Am doing general practice. Age 38. Graduate of A. School. BX care of Journal.

\$6000.00 cash practice, unopposed. Small railroad town situated in the best wheat belt of North central Oklahoma. High school, good roads, churches and splendid community. Five room residence and office equipment, about \$4000.00 is all you have to pay. Terms. Address W care of JOURNAL.

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Atoka		
Beaver		
Beckham		
Blaine	V. R. Hamble, Okeene	J. A. Norris, Okeene
Bryan	Jas. L. Shuler, Durant	J. L. Austin, Durant
Caddo	Chas. B. McMillan, Gracemont	Chas. R. Hume, Anadarko
Canadian	H. C. Brown, El Reno	Jas. T. Riley, El Reno
Carter	T. J. Jackson, Marsden	S. DePorte, Ardmore
Cherokee		
Choctaw		H. H. White, Hugo
Cleveland	R. E. Thacker, Lexington	B. H. Cooley, Norman
Cocal		J. B. Clark, Coalgate
Comanche	Kerr, Chattanooga	Mason, Lawton
Cotton		C. W. Alexander, Temple
Craig		J. W. Craig, Vinita
Creek	W. G. Bisbee, Bristow	E. W. Reynolds, Bristow
Custer	Ellis Lamb, Clinton	C. H. McBurney, Clinton
Dewey		
Ellis		
Garfield		D. D. Roberts, Enid
Garvin	N. H. Lindsey, Pauls Valley	Jas. W. Stevens, Pauls Valley
Grady	Martha Bledsoe, Chickasha	A. B. Leeds, Chickasha
Grant		Chas. A. Brake, Medford
Greer	J. B. Hollis, Mangum	E. M. Poer
Harmon		J. W. Scarborough, Gould
Haskell		John Davis, Stigler
Hughes		
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Jefferson		D. B. Collins, Waurika
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LeFlore	E. A. Campbell, Heavener	G. A. Morrison, Poteau
Lincoln	A. M. Marshall, Chandler	C. M. Morgan, Chandler
Logan	C. B. Barker, Guthrie	J. L. Houseworth, Guthrie
Love		
Major		Elsie L. Specht, Fairview
Marshall	J. L. Holland, Madill	W. D. Haynie, Kingston
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Noble		John L. Dorough, Perry
Nowata	J. P. Sudderth, Nowata	J. R. Collins, Nowata
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\*Names of officers for 1923 will be added to above as they are reported for the year.



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Many raw drugs that are rated “good” fail to pass the critical analysis of the Milliken raw drug test department. They would make good pharmaceuticals—but they would not make *the best*.

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## MERCUROSAL SUBJECTED TO PHYSIOLOGICAL TEST

**A**FTER every practicable chemical test has shown Mercurosal,\* the new anti-syphilitic mercury compound, to be satisfactory, this product is subjected to a test for toxicity on rabbits of standard weight, these animals having been found to yield more definite data than others.

Mercurosal in solution is introduced into the marginal vein of the rabbit's ear at a carefully controlled rate—very slowly depending on the size of the animal. The optimum rate of injection has been determined by numerous experiments, and is an important item in the test.

Our investigators will not

pass any batch of Mercurosal that will prove fatal to a 2- to 4-kilo rabbit in a dose of less than 40 to 80 milligrams. The standard is a minimum of 20 to 30 milligrams per kilo.

The margin of safety is impressive. Calculated on the basis of weight alone a toxic dose of Mercurosal for a man weighing 65 kilos (150 lbs.) would be 1.3 gms. or *13 times the recommended intravenous dose.*

By means of the chemical tests we determine the purity of Mercurosal, and from that might be judged its relative freedom from toxicity; nevertheless the physiologic toxicity test is invariably performed as an added precaution.



\*Disodiumhydroxymercurisalicicyloxyacetate. Contains about 43.5% of mercury in organic combination. Relatively non-toxic and non-irritating. Adapted for intravenous and intramuscular administration in the treatment of syphilis.

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# NOVARSENOBENZOL BILLON

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Sole licensees to manufacture in the U. S. A.

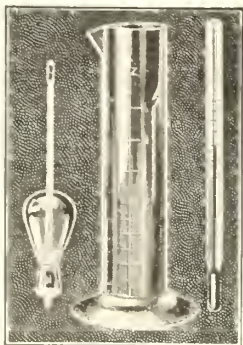
**POWERS-WEIGHTMAN-ROSENGARTEN CO., Philadelphia**

The American production is identical with the French. Orders repeated with increasing quantities, emphasize the unqualified approval of Novarsenobenzol Billon since its re-introduction into the United States.

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There is a Tycos or Taylor Temperature Instrument for every purpose.

UG 3

## Purebred

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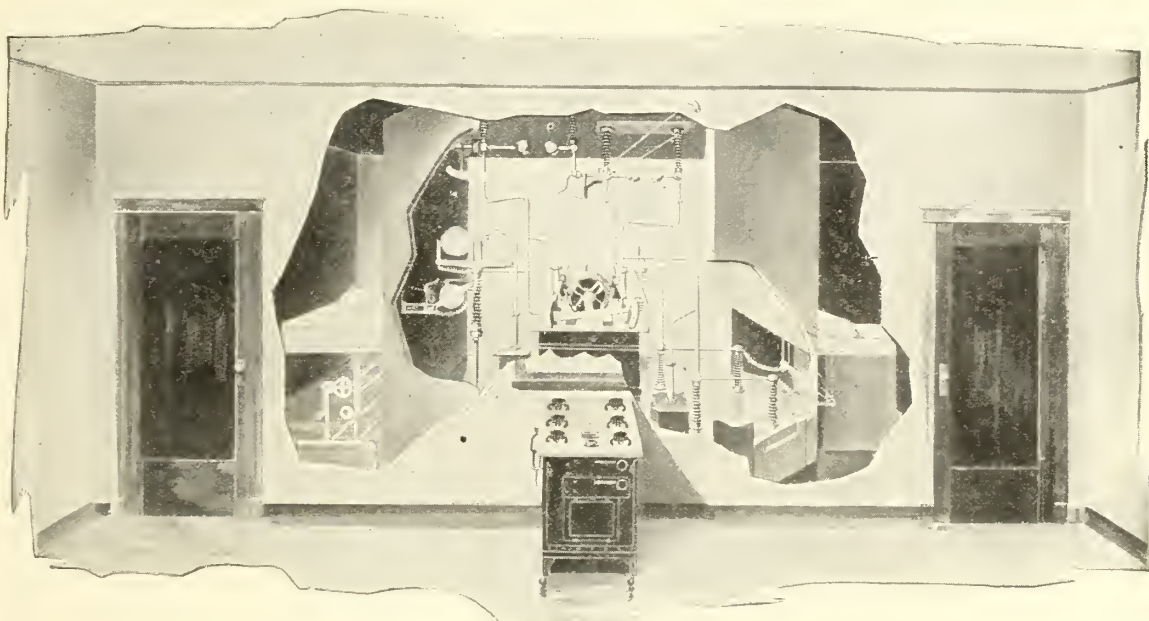
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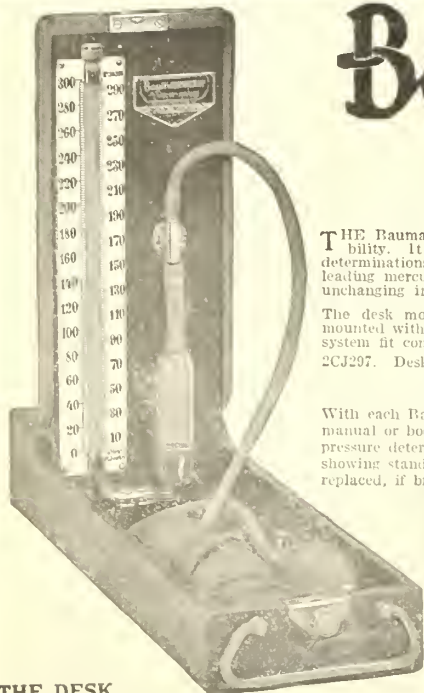
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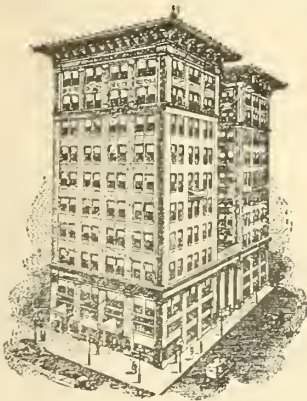
OF THE  
OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI. NUMBER 6

JUNE 1923

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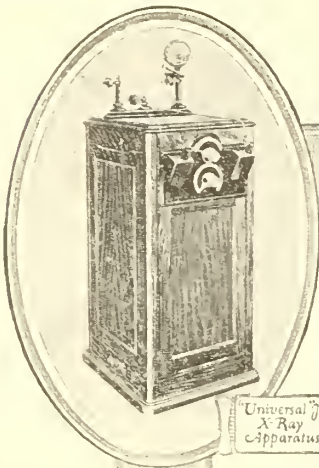
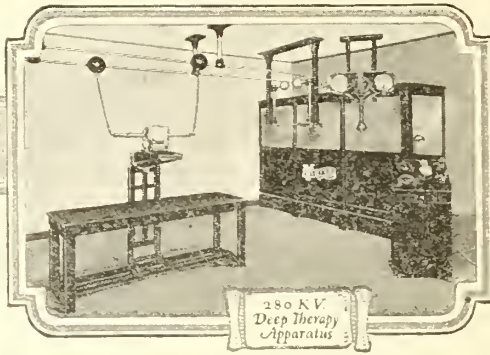
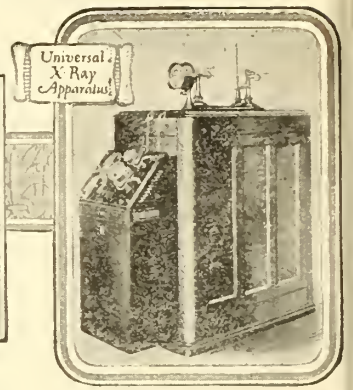
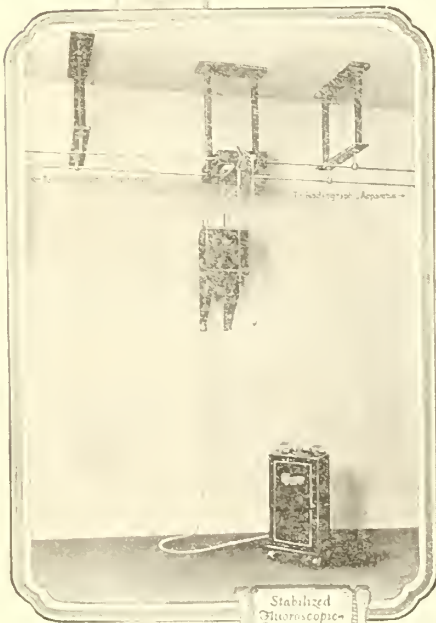
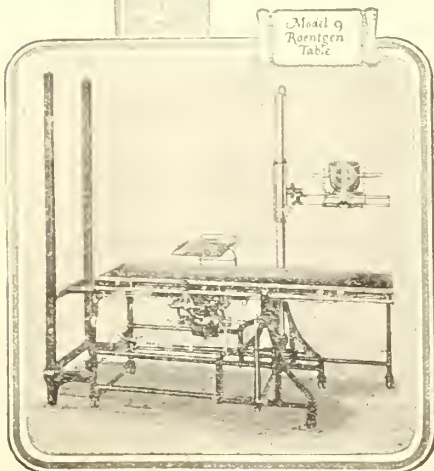
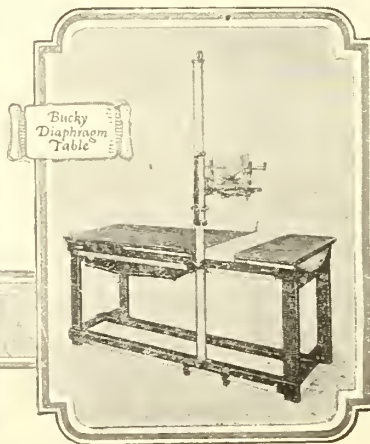
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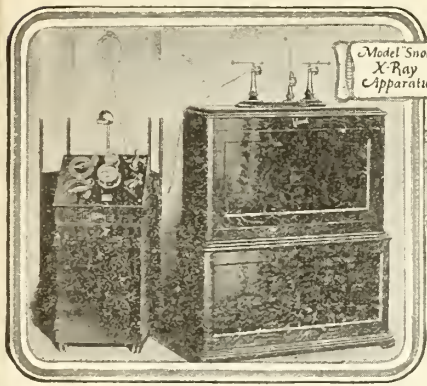
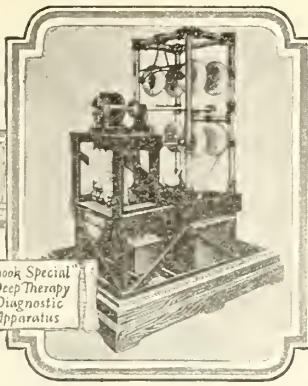
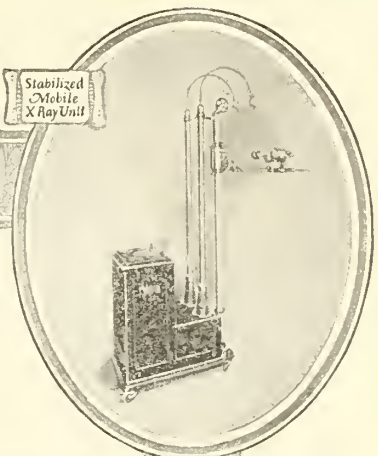
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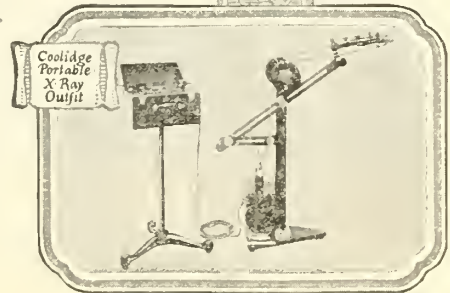
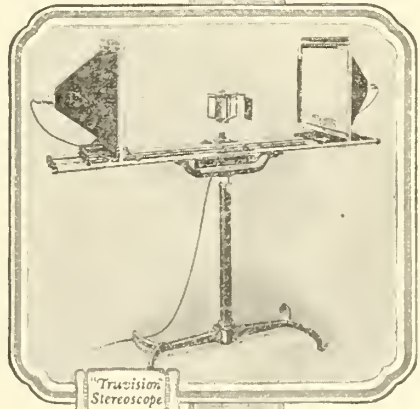
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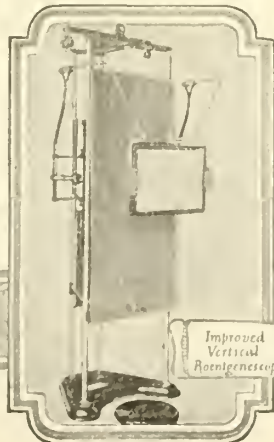
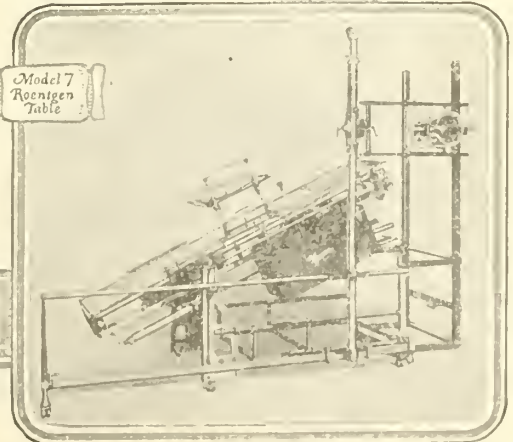
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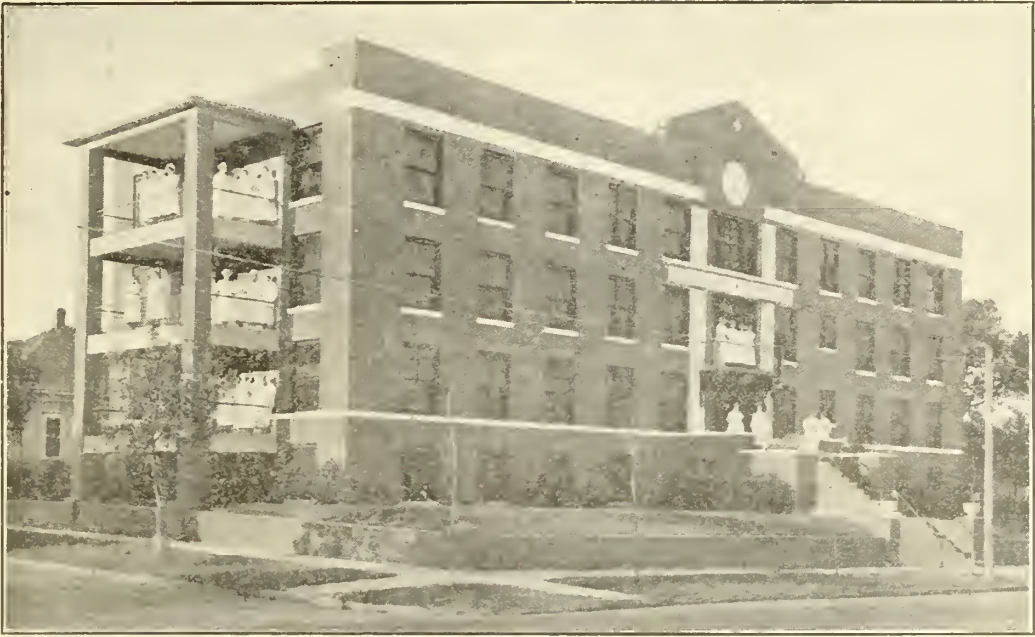
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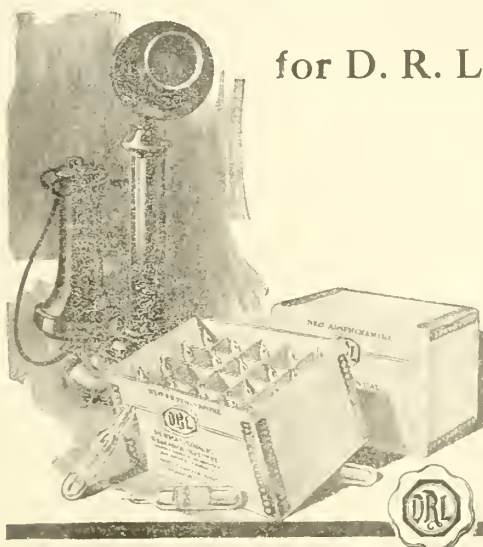
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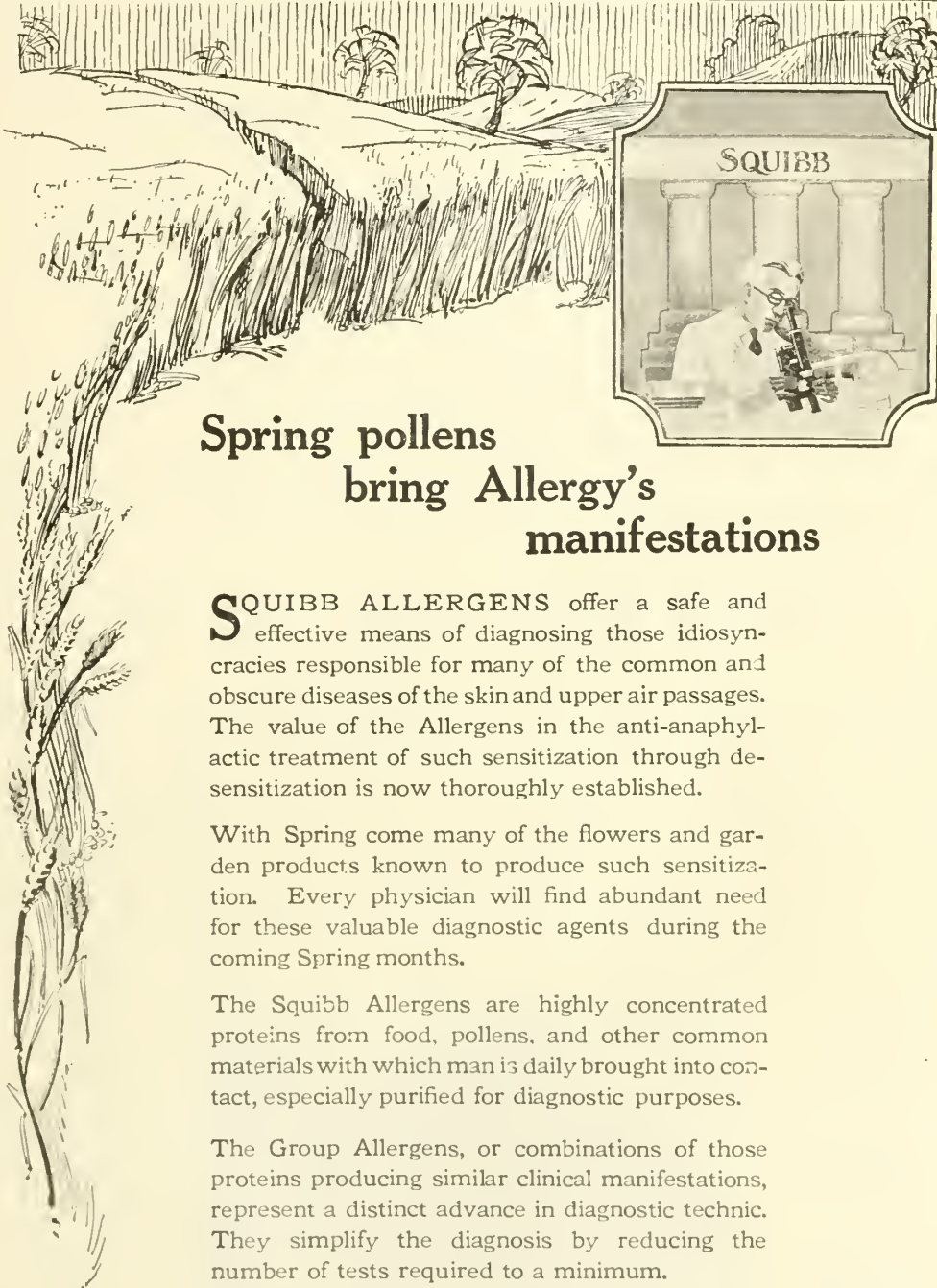
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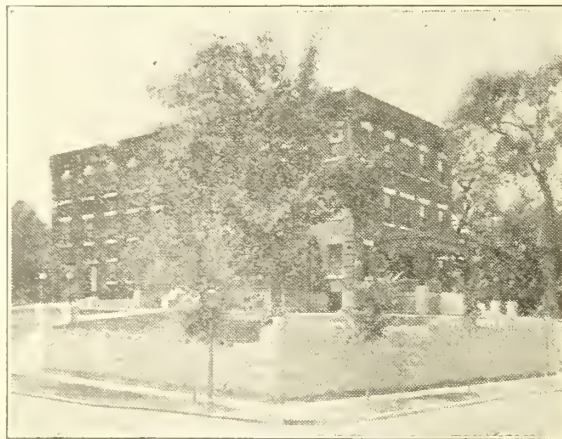
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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

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### THE PRESIDENT'S ADDRESS\*

McLAIN ROGERS,  
Clinton, Oklahoma

Being a member of so great a profession as ours with its inherited traditions of culture and honor I have esteemed a great privilege, but wish to assure you that I prize most highly the honor of being president of the Oklahoma State Medical Association, and feeling the sensitive relation of membership obligation in this association to our state and society, I wish to discuss briefly some phases relating to our profession and the public. With this obligation I believe we should as individual members estimate eligibility for election or appointment to office or important committees in this association not upon what is commonly called popularity, but such eligibility as is measured by effort and contribution to this association and society—to the end that we may make this association a more constructive, effective and working body, by manifesting such candor and sound methods in transacting the business and finally making our medical lives that of active service rather than passing, as it were, unattended.

#### About our Councilors:

Our councilors are our most honored servants, but with this honor goes much responsibility. They represent this association in their various districts and the degree to which each unit functions is measured by their effectiveness. Much depends upon their diplomacy, their effort and their ability to organize. There is an apparent lethargy among many of our county societies, particularly is this true in counties where the membership is small. It is in these communities that our councilors can render a great service by making a solution of such problems. In most instances two or more counties may arrange joint meetings, which will bring together a greater number of active members and by such organization more easily attract outside

talent when desired. The councilors should visit these societies, inspire them with the necessity of their effort and help them make their meetings attractive—by making a more workable and profitable meeting. Finally help them to more thoroughly appreciate isolation as a breeder of selfishness, which is the greatest besetting sin of humanity and particularly in our own profession, and that through a frequent and friendly intercourse such sins will be remitted.

#### Doctors as Venders of Narcotics:

It is believed by some of our best informed members that we have from 75 to 100 doctors in the state violating the narcotic law and have become venders of narcotics to drug habitues. With a consensus of opinion that drug addiction in the United States is continuously increasing makes this crime in our own profession more alarming. I believe it the duty of this association to aid through our legislative committee and as individual members, to secure laws empowering our state board of examiners to take away the license from any doctor so convicted. I believe it the further duty of our profession to aid in securing laws making it a crime for those not permanently invalidated to indiscriminately use narcotic drugs, and that such individuals be made subject to arrest and confined to some state institution, administered by state board of health or other proper medical board with special hospital or special hospitalization provided for their confinement and treatment.

#### Medical Legislation and the Public:

Our legislative committee has rendered us a splendid service during the year in getting through their legislative program. Good medical legislation is hard to obtain at any time, but especially is it hard with our present environment and psychological status. With the natural tendency of the human race to follow myths in the treatments of human ills and a further perversion which follows in the wake of war and financial depression, the awakening of the public to a sense of self-protection would at

\*31st Annual Meeting, Tulsa, Oklahoma, May 15, 16, 17, 1923.

present seem futile. Without the frank laws and evidence convincing to perverted minds and a control of political groups, who are always swayed by the greatest number of votes, the balance of political power will ever continue in the hands of the more ignorant and our status will not be greatly changed. Looking squarely at the situation we must admit some weakness and I speak advisedly when I say our great weakness is in politics. The average doctor is considered by the public to be backward in politics or a political coward. Whether this opinion is the consequence of efforts to preserve the feelings of a dual political constituency or not the result is the same. To show the average person in politics that your cause is righteous, popular and necessary is to make him fear you, and to make him fear you is to manifest power. Power is gained only by organization and is lasting only to the degree perfected upon a righteous and learned plan. The lawyer has been able by continuous and numerical assemblage in the legislative bodies of our state and country to perfect and protect his organization and thus as public servants manifest a greater power, while in local communities the influence of the doctor is greater by reason of his continuous advice and contact.

#### Hospitals and Group Service:

While we cannot boast of many large hospitals in Oklahoma, we should feel proud of the wonderful development in hospitalization in the state during the short period of the past twenty years, but to feel proud does not warrant us in feeling satisfied if we view conscientiously our shortcomings. By the stimulation of the American College of Surgeons and our State Hospital Association, appealing to our consciousness and pride most of our larger and many of our smaller hospitals have greatly improved their service. The greatest improvement in service being in the laboratory, record systems and staff regulations. Group service or clinical groups when organized properly and for the purpose of becoming more proficient, giving better service to the public, is a commendable advance, but when organized for commercial gain and vantage will ever fail to fulfill the purpose of its necessity.

#### THE FORWARD LOOK IN MEDICINE\*

H. T. BALLANTINE, M. D.  
Muskogee, Oklahoma

At this time when there is scarcely a cross road Medical Society but what is holding its Centennial Celebration of the birth of Pasteur, using this occasion to delve into the past of Medicine for the purpose of bringing forth the history of those who have added luster, and fame to our profession, as inspirations and examples to us, it seems particularly fitting that we pause for the moment, to contemplate what Medical Science in its various ramifications is accomplishing **now** and to venture a prophesy as to what the future may hold in store for us.

Men are entirely too prone to look backward, believing that the Golden Age is past, that ours is the age of mediocrity, and that all greatness has been consigned to the grave. It is true in Medicine, as in all other sciences, each age has had its outstanding figures, and since the beginning of history of the world, not even excluding the Dark Ages, each century has produced one or more physicians, who stand as guide posts along that illy marked, and often perilous road, which Medical Science has traveled, since its beginning in that dim past of ignorance and superstition, to its present high road of absolute knowledge based upon facts.

I would not, were it in my power to do so, detract one iota from the glory of these men. I would not dim the brilliancy that shines around the names of Hippocrates, or Galen, or Pasteur, or Lister, or any one of a dozen, or hundred other names that come to mind, for theirs was indeed a glorious achievement, when one considers the many obstacles they had to overcome. But it is erroneous to conclude that they alone made progress. In fact, the real progress of Medicine has had its beginning since the birth of many of you and its strides, when measured by lapse of time have been rapid indeed. The cause of many diseases passed from the realm of conjecture to that of fact as recently as 1880 when the etiologic period began, and has continued to the present time.

The cure of disease has kept pace with the discovery of its cause and in our **own** short careers we have seen Diphtheria,

\*Chairman's Address, Section on General Medicine, Neurology, Pathology and Bacteriology, 31st Annual Meeting, Tulsa, Oklahoma, May 15, 16, 17, 1923.

Meningitis, Typhoid, and many others pass from the category of scourges, to the list of highly preventable and usually curable diseases.

Our age, as all the others, has had its groups of charlatans, and excessive optimists. Its Abrams and its Coues, but when one stops to measure the almost incalculable progress of recent years, he becomes filled with amazement at the greatness of it. That amazement gives way to an optimism for the future, that knows no bounds. He believes that out of the maze of ignorance and commercialism that at present surrounds the functions of the Endocrines will come a clear knowledge of their needs, and uses. That, as the powers of the Adrenals, and Pituitary glands have been extracted and stored for future use, so will the secrets of all of the other glands be given up, and turned to man's physical and mental betterment.

He believes that those diseases, the cause of which have not as yet been worked out will be compelled to disclose their origin and with this disclosure will come their eradication.

He believes that Influenza will never again be a world menace, and Hyperthyroidism will cease to be a word with which to conjure its thousands to an early grave and its ten-thousands to a life of invalidism.

He believes that that horrible menace Cancer which hangs above the heads of its millions of prospective sufferers will be a menace no longer, and our wives and mothers may approach that all too bitter period in life, without the additional dread of a long drawn out and certain death. But instead will approach that important epoch with the calm assurance that Medical Science has safe guarded that pathway as it has stood sentinel along so many roads since time began for them.

#### RADIUM AS AN ADJUNCT TO SURGERY IN UTERINE CONDITIONS\*

W. P. FITE, B. A., M. D.  
Muskogee, Oklahoma

For years we watched the growth of the use of radium in the treatment of malignancies and in certain non-malignant conditions. Eventually, we felt impressed enough with its therapeutic efficiency that we purchased some in 1921 and began using

it in those conditions where it has been found to be of service. We have entrusted the technical application of it to an associate, Dr. S. D. Neely, who is trained in its use and in the use of the X-ray in addition because these two are often used conjointly in the treatment of the same condition. The remarks in this paper will not deal with radium in its technical application, but rather in the indications for its use and results derived therefrom.

We have, following the work of Kelly, Clark, Graves, Stacy, Miller and others, used it in the treatment of the following uterine conditions:

1. Carcinoma of the cervix.
2. Carcinoma of the body of the uterus.
3. Uterine Fibroids.
4. Uterine hemorrhage.

Our experience, like others, is that too often in uterine carcinomata, the patient does not present herself for treatment until the case should be classified as borderline or inoperable. It is in these two classes that it seems to us radium is indicated and surgery contra-indicated. Cases in which the rectum or the base of the bladder or in which the cervix is fixed due to carcinomatous extension into the adjacent tissues or in those in which there is glandular involvement higher up in the pelvis, operation should not be considered and radium and X-ray should be, in our minds, the treatment of choice. We have operated borderline cases, that is, those cases in which there was clearly involvement beyond the limits of the cervix but in which there was no fixation and the bladder and rectum were not involved, but the results were far from satisfactory.

In the past two years, these two types of cervical carcinoma in our hands have been treated exclusively by means of radium with X-ray as an adjunct. It is astounding in many of these cases to see how the growth will recede, the hemorrhage stop and the tissues in and around the cervix soften up. These cases of our series are, of course, not very old yet, but in judging from comparison with our own operative results in similar cases, we are only too glad to advise the use of radium as a sole dependency. We have been impressed by the fear that these patients, with uterine carcinoma, have of operations and it is certain that this fear has much to do with the lateness with which they present themselves for examination and treatment and we believe that should the public know more about radium as a method of treatment in these conditions, many of these would report for examination earlier. We have al-

\*Chairman's Address, Section on Surgery and Gynecology, 31st Annual Meeting, Tulsa, Oklahoma, May 15, 16 and 17th, 1923.

ready seen instances in which the woman had refused operations, even when told that that was her only chance for cure or alleviation of the symptoms. But when told that in her case radium would probably be as effective if not more so, than operation and that her hospital stay would not be more than forty-eight or seventy-two hours, that she would not have to have an abdominal operation and that if an anaesthetic was necessary at all, it would be one of very short duration, she readily submitted for treatment.

These patients are pretty nearly always old and a very high percentage are poor operative risks in whom operative mortality is far from negligible. The treatment with radium, on the other hand, has a mortality of practically nothing. We have had little or no trouble with fistula developing following treatment. Even should one occur now and then, do they not often develop in untreated cases? Not only that, but there is a material saving in hospital expenses which often amounts to several hundreds of dollars in an individual case, to say nothing of the post operative distress incident to the type of operation that is necessary in these cases. Furthermore, it is a type of treatment that can be used with very little loss in the case of indigents and those of us who possess this element would far rather see it in use in the poor class of patient who is unable to pay than to have it lying on the shelf doing no one good.

When the involvement is limited to the cervix, we prefer operation because we feel that there is a fair chance of removal of the whole growth. Also we advise the use of radium in the cervix some four or five days previous to operation. When radium is used pre-operatively, the operation should follow before reaction sets in and the consequent fibrosis takes place.

It is an open question in the minds of some at this time as to whether or not all cases should be treated by radium. None have, so far as I know yet, come to feel that they would prefer this treatment to the exclusion of surgery in the clearly operable case.

Carcinoma of the body of the uterus presents a somewhat different problem. Carcinoma of the cervix rapidly invades the paracervical tissues and tends to spread rapidly along the adjacent lymphatics. That of the body, on the other hand, remains confined to the uterine tissues far longer and has a less marked tendency to lymphatic involvement. It therefore lends

itself much better to surgical removal. With these facts in mind, we do not depend upon radium in cancer of the body of the uterus except in clearly inoperable cases, that is, in those in which there is involvement of the adjacent tissues, which is usually evidenced by fixation of the organ.

In no field of surgery has another type of therapeutic agent been so valuable as the use of radium in fibroid tumors of the uterus. In its use, several factors must be taken into consideration:

(1). The age of the patient, is she young, in her full menstrual life, or is she near or past the menopause?

(2). Is the fibroid capable of being removed without removing the uterus? Is it pedunculated, how large is the uterus and what is its consistency?

(3). What is the physical condition of the patient?

(4). Has there been a history of a pelvic inflammation in the last three or four years?

The rules we have followed have been briefly these. We do not believe that radium should be used in doses necessary for cure in young women as it will in all probability bring about a cessation of the menstrual function unless operation is contra-indicated by the physical condition of the patient or she refuses operation and thoroughly understands the probable outcome of treatment. It should not be used in cases that give a recent history of pelvic inflammation, in fibroids larger than four months' pregnancy, in pedunculated fibroids, in cystic fibroids and in that soft type of fibroid which has undergone myxomatous degeneration. Tumors diagnosed as fibroids but which continue to enlarge following treatment should be operated because of the possibility of sarcoma, undiagnosed carcinoma of body or degenerating fibroid.

It is clearly indicated in other types of fibroids and I know of no more satisfactory means of stopping a hemorrhage from a fibromatous uterus than the judicious use of radium.

Our results in the types of cases outlined above have been very satisfactory and we have been enabled to successfully handle patients who, if treated operatively, would have presented very serious risks, aside from the fact that they were treated in this way with very little inconvenience to themselves.

In the checking of uterine bleeding, radium is again a very useful agent. Here, also, its use must be surrounded by the

necessary diagnostic precautions as it must not be used in inflammatory conditions, abortions, pedunculated intrauterine fibroids and ectopic pregnancies. In those cases where we contemplate its use, we do a curettment immediately preceding the introduction of the radium. This is especially important in ruling out carcinoma of the body of the uterus, pedunculated intrauterine fibroids and in the removal of mucous polyps.

The typical type of uterine bleeding where radium is so useful is that so-called "essential hemorrhage" which occurs in a normal or slightly enlarged uterus at or near the menopause. For this condition, surgery is not a competitor and is often attended with considerable risk as these patients are often quite anemic and in poor physical condition as a consequence of prolonged uterine bleeding. In those cases in which bleeding occurs, without apparent cause in younger women it is equally useful. Here it may be used in sufficient dosage to stop bleeding, but not stop menstruation.

We have not yet used radium in the treatment of leucorrhea nor chorio-epithelioma as advised by some, so we will not enter into a discussion of these conditions at this time.

It is not the intention of the writer to claim uses for radium that it is not justly entitled to, but he has been so impressed with its efficiency in those types of cases described that he has materially reduced the number of uterine carcinoma, uterine fibroids and uterine hemorrhages operated upon. He does not think it to be a panacea in these conditions, but does sincerely believe that judiciously used, it is probably the most useful single type of treatment that has been added as an adjunct to surgery in many years, especially in uterine conditions.

#### CHAIRMAN'S ADDRESS\*

W. T. SALMON, M. D.  
Oklahoma City

As the delegated officer of this section of special work in the Oklahoma State Medical Association, it is my pleasure to welcome you to the thirty-first annual meeting.

As the history of this association is still fresh in the memories of many of the members it would be superfluous for me to recount the crude conditions that existed in

Oklahoma at the time of our organization.

Neither is it flattery for me to say that, from this chaotic condition, the Oklahoma Medical Association has developed to a standard quite commensurate to medical associations, in many other states, that justly boast of a high standard of perfection gained by an inheritance of many years of hard labor.

Acknowledging the distinction I feel in being a member of our association I have a deep appreciation of the honor you have conferred upon me in electing me to preside over your deliberations. To my predecessors is due the distinction of raising this section of our association to its present high standard. They are now enjoying the accolade of duty well performed, and I am sure they feel the thrill of satisfaction in having been selected as your presiding officer and strive with a zealous culture to make our transactions equal to those of similar organizations that already wear the laurels of honor and success.

I am taking no liberty when I suggest to the younger members that they seek the executive offices of this and other medical associations with which they may be affiliated. Put yourselves in training that you may be worthy to erect your own monument by adding to that which our forefathers have bequeathed us and in later years you will derive a great pleasure in the reflection that you have been numbered with the "Old Guard".

It is quite profitable to contrast the conditions of today with the time at which the Oklahoma Medical Association was organized. As recently as twenty-five years ago few physicians were qualified as specialists in any field of medicine as it is known today. At that time the specialties were so inviting that many physicians made the declaration that they were going to limit their practice to a particular field and at once they became leading specialists in that field for which they may have had but slight training in the technic of a few operations.

Time has demonstrated that it is necessary to make an exhaustive study in the field in which he expects to enter before he is qualified or accepted by other physicians as one capable to do special work.

The advancement of medical science, in the last few decades, has been more marvelous than in any other profession where brain instead of brawn was to point to achievements attained. No longer is medicine taught in a haphazard way, no longer

\*Chairman's Address, Section Eye, Ear, Nose and Throat, 31st Annual Meeting, Tulsa, Oklahoma, May 15, 16, 17, 1923.

can the illiterate claim the stage where only the right to tread is gained by years of labor for the education that unlocks the mysteries that are so securely concealed.

As great as has been the progress of the last few years it is but a stepping-stone to the wonderful flood of revelations which the future shall disclose.

As rapid as has been the advancement of medical science there has been no special branch that has excelled the improvement made in our particular field.

It should be the aim of this association to attract men of high intellectual order who have received their training from some high-grade medical school and at least a year's training in the basic principles of some accepted school that instruct in this distinctive field, and to deny admission to those who are unwilling to wave high the banner of education above the head of the surging mass of ignorance.

Our state medical laws should be amended so that those who desire to enter a special field of medicine should show an undoubted qualification.

I desire to thank the essayists who have so generously contributed to the success of this meeting. I believe the program will meet with your approval but I am going to suggest that the next chairman of this section get better acquainted with the younger members, than has been my pleasure to do, and request them to make a part of our program.

#### SOME DERMATOLOGICAL AND RADIOLOGICAL OBSERVATIONS\*

CHARLES H. BALL, M. D.  
Tulsa, Oklahoma

To say that I appreciate the honor conferred upon me last year in being elected to preside over the section on Dermatology, Radiology and Urology reminds me that words often are puerile means of expression. It has been my earnest endeavor ever since coming to Oklahoma six years ago to promote the best interests, in my feeble way, of the profession I revere. It has been indeed a privilege and a pleasure to be associated and to collaborate with the many intelligent, upright and sincere workers in this, our chosen field.

\*Chairman's Address, Section on Genito-Urinary, Skin and Radiology, 31st Annual Meeting, Tulsa, Oklahoma, May 15, 16, 17, 1923.

While the dermatological specialists in Oklahoma are but few in number, the part they play in the diagnosis of many diseases is no inconsiderable one, because the successful practitioner of this branch must be letter perfect, not only in his specialty, but also in endocrinology, surgery, internal medicine and diseases of the genital organs as well, to say nothing of toxemias, both internal and external. In a word, a dermatologist should be a pretty good all-round doctor.

Since the addition of the X-Ray and radium to our armamentarium we have been vitally re-enforced in our attacks on many skin troubles heretofore difficult to handle. For instance, practically all cases of superficial epithelioma and even rodent ulcer respond promptly to either X-Ray or radium therapy. Acne, which has been the despair of so many general practitioners for many years, who have been inundating and torturing their patients with injections of vaccines, with uncertain results, can now be almost certainly relieved with properly applied X-Ray exposures. While as yet the results in psoriasis are not permanent, still the treatment with the X-Ray will clear the case up temporarily at least, and obviates the necessity of using a badly staining and very objectionable ointment treatment, containing chrysarobin. Ringworm in its many varieties, 56 one investigator asserts, yields to the X-Ray right now, including the variety which was spread broadcast as a result of the war, epidermophytosis. Carbunculos and furunculosis have been removed from the domain of surgery, because the X-Ray positively benefits them. In fact, Drs. George M. McKee and George C. Andrews, in the American Journal of Roentgenology, April 1922, in an article on the uses of the X-Ray and radium, lists over 80 conditions of the skin which are amenable to radiation.

From my limited experience in the X-Ray treatment of hypertrophied and infected tonsils, and reading the reports of other operators in this field, may I be permitted to venture the prediction that in the near future their surgical removal will become practically obsolete, thus saving many poor kiddie and an occasional adult from undergoing the dangers of surgical shock, hemorrhage and anaesthetic mortality, because, while the X-Ray will not do a tonsillectomy, it has a peculiarly destructive effect on hypertrophied and pathological adenoid tissue, thus leaving the tonsils in a normal condition, so that if they have any function at all it will not be interfered with.

In discussing a paper by Dr. Lafferty, of

Charlotte, N. C., on the treatment of tonsils, read at the meeting of the Southern Medical Association at Hot Springs, Ark., in November, 1921, Dr. Blesh of Oklahoma City said: "I confess that it is news to me that a tonsillectomy can be performed by the radiologist. But a few years ago the surgeon was on the defensive for the reason that he was accused of invading every other field in medicine and for appropriating every other man's work. The tables are now turned, and it seems the surgeon is on the run. Should the radiologist continue reaching out, the only field for the surgeon will be that of traumatic surgery."

Cervical adenitis, lupus vulgaris and erythematosus, papillomata, ulcers, prurigo, lichen, folliculitis barbae, hyperidrosis and leukoplakia, all respond promptly to superficial X-Ray or radium therapy.

Among the conditions that are amenable to deep therapy treatment may be mentioned hypertrichosis, angiomata, port-wine stains, keloids, tuberculous glands, hyperthyroidism, uterine fibroids, uterine hemorrhage at the menopause without demonstrable pathology, Hodgkins disease, splenomyelogenous leukemia, splenomegaly, the malignant growths, such as sarcomata, epitheliomata, carcinomata and leukoplakia.

Just a brief summary of the action of radio-therapy: It produces an edema of the endothelial lining of the blood vessels. This edema becomes pronounced, so that the small arteries become occluded by it, thus shutting off nutrition to the growth. When the treatment is carried far enough this edema results in an endarteritis obliterans in the small capillaries.

The second action is on the cells of the growth themselves. A cloudiness of the nucleus is produced, followed by disappearance of the nuclear membrane and later by cloudiness and disappearance of the entire cell, the debris being carried away by the phagocytes. After these cells have been destroyed they are replaced by connective tissue.

In the latest 20-inch gap machines wonderful results are being reported from many operators in this and foreign countries. Thus it will be seen that the radiologist is making gigantic strides in therapeutics, and in reality the surface has only been scratched.

In our daily intercourse with many ailments that the flesh is heir to we should always bear in mind the causative factor, whether it be an occupation, racial char-

acteristic, environment, mode and habits of life, or as stated by one of the professors of Chicago University at the meeting of the Radiological Society of North America at St. Louis last year, who followed out hereditary influences of many generations of cancer mice, "What is put into the protoplasm must come out." In other words, the belief is gaining that hereditary predisposition to disease is inherent in the individual, and the environmental, occupational or climatic influences cause its development. That being so, it behooves us to give some thought to eugenics as a means of eliminating a lot of future trouble.

On behalf of the Tulsa County Medical Society I bid you welcome to Tulsa, and hope your visit to our city will be both pleasant and profitable.

#### PROCEEDINGS OF THE OKLAHOMA CITY CLINIC ROUND TABLE, WESLEY HOSPITAL, OKLAHOMA CITY, OKLAHOMA.

##### STENOSIS SIGMOID, CICATRICAL

A. L. BLESCH, M. D., F. A. C. S.  
Oklahoma City, Oklahoma

A physician 50 years of age comes to the clinic by reference of Dr. Postelle with the history of a chronic and increasing constipation which has existed since childhood and which has become so obstinate within the last year that movements are secured with the greatest difficulty and only in response to vigorous purgation with hydrogogue cathartics. He has taken epsom salts daily for many years. He is emaciated, pawniculus adiposus practically absent. Digestion so disturbed that eating is disgusting to him. He suffers no clarifying pain syndrome. Aside from the overshadowing symptom of an ever increasing constipation which now amounts to a chronic obstruction and the dependent gastro-intestinal disturbances there is no symptom syndrome upon which to base a clinical diagnosis.

During childhood he suffered from an obscure abdominal lesion which was mildly febrile in character, chronic in character, associated with gastro-intestinal disturbances and a sore and tender abdomen, the exact character of which he is now unable to say, but from which he made a complete recovery with the exception that to this childhood illness he dates his constipation.

Other illnesses in his life have been un-consequential. No injuries or operations.

Physically he is a man of small stature, emaciated of muddy complexion, present-

ing no clinically demonstrable lesions, whose main object in life seems to center on getting a daily bowel evacuation—a gastro-intestinal neurasthenic. He has followed every dietary and cathartic fad and had become a worshipper at the shrine of epsom salts with which he daily dosed himself.

Laboratory findings are negative except for an indefinite (over 70 hour) fecal retention in the pelvic sigmoid. A barium clyster showed a permanent, even contoured stenosis about 4 inches from the pelvic dip of the sigmoid involving about 2 inches of the gut.

**Diagnosis.** Intestinal obstruction, sigmoidal, non-malignant, probably due to adhesions.

Advice, exploratory laparotomy. This was readily accepted and upon opening the abdomen the constriction, which was due to an old cicatrix, was readily found. Upon searching further, old calcified mesenteric lymphatic nodes were found.

Upon freeing the gut it readily inflated to normal size, leaving a large denuded area upon which a free omental graft was darned much as a patch is put over and on a hole in a garment (a little trick which I have often used to cover peritoneal defects).

Before leaving the hospital, patient's bowels were moving normally, appetite good and gaining in weight.

**Remarks.** Here we are dealing with a lesion which had its origin in an old tuberculous ulceration arising in a broken down gland, occurring in childhood. The calcified nodes are further evidence of an early abdominal tuberculosis.

#### CASE OF CHRONIC INTESTINAL OBSTRUCTION

D. D. PAULUS, M. D.  
Oklahoma City, Oklahoma

Patient, female, age 36 with negative family history. Para II, labors normal, no abortions. No serious illness of any kind. Operated six years ago, appendectomy, shortening of round ligaments, resection of left ovary, repair of cervix. "Flu" in 1918, no complications.

Consults physician for the same trouble for which she was operated six years ago, without relief. This trouble began eleven years ago, consisting of constipation, present since childhood and gradually getting worse. Pain in lower part of abdomen. Backache involving sacral and lumbar region and also easily fatigued. Had been practically an invalid for several years. During

past few years has lost from 130 to 105 pounds. No headaches. Excites rather easily. Sleeps well, however. Has had rest cure, diet, etc., but did not get good results. Elevation of hips while resting in bed makes patient feel better.

Physical examination: Rather thin, poorly nourished woman. Pulse 84, temperature 99.2. Blood pressure 140-90. Pupils negative. Throat: Tonsils submerged and cryptic. Enlarged left inferior turbinate. Left posterior cervical gland palpable. Chest negative. Abdomen shows well healed scar of previous operation. Liver and spleen not palpable. Slight tenderness over lower right quadrant, just above pelvic brim. Pelvic examination shows uterus in marked anti-version, freely moveable not especially tender. Left is quite small but easily movable, tubes normal. Perineum intact.

Laboratory: Urine 1030, acid negative. W. B. C. 7800, R. B. C. 3,950,000. Hb. 70, Wassermann negative.

This case was at first glance considered to be a case of "Congenital Asthenia Universalis" with visceroptosis but the blood pressure and firm ascertain of the patient that constipation was increasing, made a complete work-out of the G. I. tract imperative.

The X-Ray revealed marked visceroptosis of both stomach and colon. Barium meal delayed three days in sigmoid region. Barium anema revealed a definite filling defect in upper part of sigmoid about two inches long. The nature of this obstruction, of course, is obscure, but maybe congenital or due to acquired adhesions. We have advised re-examination at some future date. In the mean time we shall try to build up the patient a little before operation. I shall report again at the next meeting, the findings on operation.

A very similar case occurred in a patient who came to the Clinic about one month ago. This man gave a history of increasing constipation for past 20 years. Has had to use salts almost daily. On Proctoscopic examination an obstruction was found about 8 inches above anal opening. X-Ray revealed a narrow and almost complete obstruction, quite smooth in character. On operation a narrow band about 1-4 inch wide was found, on releasing this band entire sigmoid filled up easily. Enlarged lymph nodes in abdomen would indicate that this band of adhesions had probably resulted from a tuberculosis process in childhood. The patient made a complete recovery and bowels now move daily, without any medication whatsoever.



RALPH VERNON SMITH, M. D., PRESIDENT  
Oklahoma State Medical Association.  
1923-1924.

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

Issued Monthly at Muskogee, Oklahoma, under direction  
of the Council

VOLUME XVI JUNE, 1923 No. 6

DR. CLAUDE A. THOMPSON,.....Editor-in-Chief  
508-9 Barnes Building, Muskogee, Okla.

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710 Surety Building, Muskogee, Okla.

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The editorial department is not responsible for the opinions  
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Reprints of original articles will be supplied at actual cost,  
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Articles sent this Journal for publication and all those read at  
the annual meetings of the State Association are the sole property  
of this Journal. The Journal relies on each individual contribu-  
tor's strict adherence to this well-known rule of medical journalism.  
In the event an article sent this Journal for publication is pub-  
lished before appearance in the Journal, the manuscript will be  
returned to the writer.

Failure to receive the Journal should call for immediate notifi-  
cation of the editor, 508 Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession,  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
gested that wherever possible members of the State Association  
should patronize our advertisers in preference to others as a  
matter of fair reciprocity.

### EDITORIAL

#### IN SINCERE GRATITUDE

The writer, your Secretary-Editor-Treasurer, who has held that position for better or worse, through good and bad fortune, over a period of fourteen years, feels it is not out of place to voice to the membership and the delegates representing that membership, his sincere gratitude over his reelection to the office of Secretary-Treasurer-Editor. Certainly candor and honesty demand the recognition of the fact that there was much to criticize in the management of affairs at times. Not in the management of affairs themselves, but as to the equation involved in personal misfor-

tunes and mishappenings. It calls only for expression of the sincerest gratitude to those who gave him a chance to make good when that procedure meant more to him than any other one thing, more than money, emoluments or reward in any other form. No one thing could have been and is more helpful to your Secretary-Treasurer-Editor, than the spirit of forgiveness and nobility evidenced by the hundred or so delegates from every quarter of the State. Some of these men, by the way, dug into their pockets and purchased railway tickets for more than a thousand miles of travel, solely, as one expressed it "to be on hand to protect your interests". The fact that that procedure did not meet with the approval of all delegates means nothing, fades into insignificance, when it is recalled that in the past, regardless of how well or how badly your affairs have been conducted, a certain element of our Association has always found it to their choice to oppose the writer, to seek someone else, just anyone except the writer.

With this statement of facts and conditions we shall end the matter, but not before saying that this is written with a heart full of gratefulness. To those who took a different view of the matter, there is no criticism, if the opposition was in good faith, for the best interests of the Association, which interests are paramount to any one man or clique or set of men. This JOURNAL is still freely **their** JOURNAL, theirs to use as they think best, and no obstacle shall be allowed, even by shifty technicalities, to prevent their use of it, regardless of their position in the matter. They are to know that this is written to them in sincerity and that the spirit will be carried out to the most extreme degree. Their position shall not be allowed to prevent their free expression of feeling and sentiments in what is **their own**, this JOURNAL. To those who felt aggrieved over what they thought mistreatment as to their malpractice suits, publication of their papers and similar matters, we have no voice of complaint to make. They shall have the same square deal given the best friend we have, no more, no less.

#### THE TULSA MEETING

There might have been some equally good, but certainly none better than the Tulsa meeting. Every department, every section, every subcommittee, so far as is now known was free from friction and impediment as possibly could be. Of course, it was manifestly impossible for any one man to see and attend every function of

activity, but from not one of them, so far has come a single complaint as to mismanagement, except for a few trivialities, amounting in themselves to nothing. The exhibitors were wrought up for a few hours on finding themselves apparently denied one-half of the space supposedly allotted to them, but that was corrected by a few minutes of telephonic conversation with Mr. Overholtzer, the Tulsa Superintendent of Schools. There was one complaint, universal and just, not to be denied as properly made. That was the attitude of the hotels. The Tulsa hotels charged, and collected higher rates for their rooms than the very finest New York City hotels. For instance, the Ketchum charged and received more for rooms than does the magnificent Hotel Vanderbilt of New York. But it must not be forgotten that that could not possibly be averted or corrected by the Tulsa medical profession. Fixing those rates lay in the discretion and judgment of one man, not a physician, but one who for a short, fleeting time holds a monopoly on the hotel business of the State's greatest City, Tulsa.

### *Editorial Notes — Personal and General*

**Dr. Roy Millenden** of Mt. Pleasant, Iowa, has located at Alex.

**Dr. Orange W. Starr**, Drumright, has been re-appointed city physician.

**Dr. C. A. McClelland**, Miami, attended St. Louis Clinics in April and May.

**Dr. J. A. Morrow**, for many years located in Sallisaw, has moved to Durant.

**Dr. G. M. Clifton**, Norman, has been appointed Health Officer of Cleveland County.

**Dr. A. M. Marshall**, Chandler, visited Philadelphia on professional business in May.

**Dr. V. C. Tisdal**, Elk City, who underwent an operation for appendicitis in May, is recovering nicely.

**Dr. M. M. DeArman**, who was seriously ill in April on account of Pneumonia, made a nice recovery.

**Dr. J. H. Plunkett**, Wagoner, is spending a month at the Tulane Medical School, taking up post-graduate work.

**Dr. A. W. Tolleson**, Eufaula, underwent a surgical operation in Muskogee in April, and has made a nice recovery.

**Dr. C. M. Bloss**, Okemah, visited Chicago and New York Clinics in April. Dr. Bloss is specializing in X-Ray technique.

**Dr. and Mrs. R. L. Westover** of Okmulgee, are motoring through Indiana and will visit their daughters attending De Pau University.

**Dr. William A. Fowler**, Oklahoma City, and Miss Virginia Tolbert, of Hobart, were married at Hobart on April 29. They will make their home in Oklahoma City.

A group from Oklahoma City will have a building devoted exclusively for the use of physicians and dentists. The enterprise is headed by Dr. J. S. Pine, Oklahoma City.

The JOURNAL notes with extreme sadness the death of Mrs. Alice Cornett Hayes, A. D. S., wife of Dr. B. A. Hayes, Guymon, Oklahoma. The many friends of Dr. Hayes extend their deep sympathy in this hour of trouble.

**Dr. Sam McKeel**, Ada, will not be bothered any more, not even by courts, in so far as they attempt to interfere with his duty as an election officer. As the member of the county election board it was held that he rightfully disregarded an order of the District Court.

Woodward County Medical Society met at Supply as guests of Dr. and Mrs. E. L. Bagby. After a morning of Clinical work Dr. A. E. Davenport, State Commissioner of Health, addressed the members on health conditions of the State. About fifty physicians were present.

**Dr. George F. Pyatt**, Oklahoma City, according to press despatches, has been appointed on the State Board of Medical Examiners, by Governor Walton. No disparagement is intended in stating that Dr. Pyatt, whose picture comes to the JOURNAL from a newspaper clipping, is physically deficient in that he is a cripple. His motto, "Keep on Smiling," indicates that he is not crippled or deficient mentally. That can not be said of all the Governors appointees.

Henryetta Physicians held a meeting April 20, and reorganized the Henryetta Medical Society. While this organization is not connected with the Okmulgee County Medical Society, one must be a member of that organization before he is allowed membership in the Henryetta Society. Dr. G. Y. McKinney was elected President; Dr. G. A. Kilpatrick, Vice-President; Dr. Hugh H. Monroe, Secretary-Treasurer. It was decided there would be a meeting every week, on Tuesday night. Those attending were tendered a collation by Drs. A. R. Holmes and G. Y. McKinney, for which a vote of thanks was extended. About twenty-five physicians were present.

**Dr. G. R. Phelan**, Oklahoma City, is the latest Richmond to enter the list this time against tobacco. If he is correctly quoted he states: "Tobacco is a cause of blindness like unto wood alcohol." The very paper publishing the bosh takes a fling at Dr. Phelan's position by calling attention to what vicious propaganda it would have been had the statement been made about the time of the Ninth Legislature. Of course, everyone who knows anything about it knows tobacco does not cause blindness. The thing that amazes the JOURNAL is at finding a doctor furthering such impossible propaganda. There is

neither lay, practical or scientific basis for such statement.

Muskogee County Medical Society met Monday, April 23. A communication was read from Dr. F. L. Walton, County Superintendent of Health, asking cooperation of county physicians in securing reports of births, deaths, etc. After brief discussion it was pointed out that the office of the County Superintendent of Health was not concerned in such matters but the laws vested all such activities in the office of Registrar of vital Statistics. Dr. R. T. Herod, Keefeton, was elected to membership. Dr. I. B. Oldham presented a review of Current Surgical Literature. Dr. F. W. Ewing presented a review of Current Medical Literature, especially stressing late views on the treatment of Diabetes.

#### TRANSACTIONS, THIRTY-FIRST ANNUAL MEETING, OKLAHOMA STATE MEDICAL ASSOCIATION, TULSA, MAY 15, 1923.

COUNCIL, Meeting at The Ketchum Hotel. Dr. McLain Rogers, President, presiding.

The Auditor, Mr. Hugh Lewis, of the Commercial National Bank, Muskogee, and the Auditing Committee, composed of Drs. P. P. Nesbitt, Chas. H. Ball and L. S. Willour, approved the financial statements as shown under the head of Secretary-Treasurer-Editor's Report.

Ordered certain bills of individual councillors and those of the legislative committee, the latter amounting to \$285.00, paid.

Recommended that the House of Delegates protest to the Veterans Bureau against the training of Chiropractics by the Bureau under the guise of "doctors" or "students".

That the House, hereafter, select as delegates to the A. M. A., provided their services are apparently satisfactory, delegates, who shall be more or less permanent, this arrangement to be arrived at by the process of adopting a policy of re-electing the same delegates.

That the Governor of Oklahoma be asked to investigate what seemed to be an unwarranted discrepancy in the prices charged Oklahomans for biologicals, etc., over those charged citizens of other states, the charge being that Oklahomans were called upon to pay approximately one-third more than people of other states. It also recommended that the matter be placed before the Interstate Federal Trade Commission, for their information.

The Council sub-committee, Drs. L. S. Willour and J. T. Slover, in the case of Bryan County and J. T. and O. J. Colwick, reported that in the case of J. T. Colwick

the direction of the Council had been fulfilled by Bryan County Society. In the case of O. J. Colwick the sub-committee recommended as follows:

"We recommend to Bryan County Society that they consider his case with view to re-establishment of his membership, leaving, however, this matter entirely in the hands of Bryan County Society."

I certify that the above is a true statement, condensed, of the action of the Council, Oklahoma State Medical Association, and that it was so reported to the House of Delegates of that body, with other matter in the form of resolutions, proposals, propositions, etc., May 15 and 16, 1923.

C. A. THOMPSON,

Secretary-Treasurer-Editor.

#### House of Delegates

May 15, 1923—1:30 p. m., Municipal Building, Tulsa, Oklahoma.

Dr. McLain Rogers, President, Clinton, Oklahoma, presiding.

The Minutes of the 1922 meeting were approved as published in the JOURNAL of May 1922.

The report of the Secretary-Treasurer-Editor, already submitted to and approved by the Council, was circulated to each member of the House of Delegates in type-written, duplicate form. The report was adopted by the House.

Report of the Council, containing various recommendations and copies of resolutions, was received, and approved, insofar as is shown by the publication of the resolutions, following, herewith in this report.

The following action was taken as to selection of a delegate to the A. M. A. After it was pointed out that the only thing the House could do was to recommend a line of action or policy, which it was hoped would be followed by other and succeeding Houses after this date; it was declared that it should be the policy of the Association, through its House, to re-elect each year, so long as their services were apparently satisfactory as such, the same men as representatives of the members of the Oklahoma State Medical Association in the House of Delegates of the American Medical Association.

The following resolutions were adopted:

**RESOLUTION** Offered at Thirty-First Annual Meeting, in the House of Delegates, Oklahoma State Medical Association, Tulsa, Oklahoma, May 15, 16, 17, 1923 as to discrepancies in prices of biologics charged Oklahomans and citizens of other states.

**WHEREAS**, certain companies, dealing in biologicals, vaccines, serums and other nec-

essities to the citizens of Oklahoma, offered on a certain date to sell their products in the State of Tennessee at one price and in the State of Oklahoma, at a price practically double that charged citizens of Tennessee, as indicated by the comparative list shown below in this statement, as follows:

OKLAHOMA	TENNESSEE
Diphtheria Antitoxin	Diphtheria Antitoxin
1,000 units.....\$ .75	1,000 units.....\$ .48
3,000 units..... 2.00	3,000 units..... 1.32
Typhoid Vaccine	Typhoid Vaccine
3 syringe pack- age .....\$1.20	3 syringe pack- age .....\$ .80
3 ampul pack- age ..... .36	3 ampul pack- age ..... .28
Smallpox Vaccine	Smallpox Vaccine
10 capillary tubes .....\$1.00	10 capillary tubes .....\$ .80
5 capillary tubes ..... .50	5 capillary tubes ..... .40
Tetanus (Lockjaw) Serum	Tetanus (Lockjaw) Serum
1,500 units.....\$2.50	1,500 units.....\$1.67

**WHEREAS**, the above is an exact reproduction of advertisements appearing in issues of certain medical publications, published in the State of Tennessee, and the State of Oklahoma, and on the same dates, and,

**WHEREAS**, there seems to be no apparent good reason or explanation for this great discrepancy in prices, and,

**WHEREAS**, by every right, the citizen of Oklahoma should be treated with the same consideration as the citizen of any other state, and,

**WHEREAS**, it appears that only through the authority and management of the office of the State Commissioner of Health of Oklahoma, may this injustice be corrected and those responsible for the treatment accorded the citizens of Oklahoma be held responsible, and,

**WHEREAS**, everyone concerned is advised that this mismanagement **did not occur during the incumbency** in office of the present State Commissioner of Health, Dr. A. E. Davenport, but did occur prior thereto, therefore,

**BE IT RESOLVED**, that this condition of affairs be called to the attention of the office of the Governor of the State of Oklahoma, Honorable Jack C. Walton,

**BE IT RESOLVED**, that the Secretary of the Oklahoma State Medical Association be, and is hereby instructed to call the attention of the said Governor to the entire matter, and that he place in the hands of the Governor, or his agent, all the advertisements setting out the matter complained

of with any such other data which he may possess or come into possession of.

Adopted, this the 15th day of May, 1923.  
Correct,

Dr. Claude A. Thompson,  
Secretary-Treasurer-Editor.  
Oklahoma State Medical Association

Action on the National Prohibition Act and the Harrison Narcotic Act.

**WHEREAS**, it has come to the knowledge of the people of the State of Oklahoma, that regulations are now issued under the National Prohibition Act, and the Harrison Narcotic Act, without those who must live under such regulations ever seeing a draft of them or even having been consulted with respect to the matter; and, obviously the best results cannot be obtained in that way; and, officials devoting their entire time to bureau activities cannot possibly see matters from exactly the same point of view as do practicing physicians and others on the outside; and, moreover, such a method of bureau legislation is unnecessary, and partakes too much of the nature of star chamber proceedings to be in harmony with our system of government; and, it has nothing to commend it beyond the fact that it is, apparently, more convenient for bureau officials; and, if the regulations under consideration cannot stand the light of day before they are promulgated; it is doubtful if they should ever be promulgated; and, certainly, neither Congress nor any state legislature would venture to pass a law without giving the people a chance to see a draft of it, and there is no reason why an officer or bureau chief should do so, therefore be it

**RESOLVED**, that the House of Delegates of the Oklahoma State Medical Association, in annual session assembled, representing over 1500 legally qualified physicians adequately trained in the arts and sciences (the only foundation for the recognition, control and prevention of disease) hereby directs that the proper officers of the Oklahoma State Medical Association to present this protest to the proper officers of the government, requesting that no regulation be promulgated under the National Prohibition Act, or under the Harrison Narcotic Act, relating to the practice of medicine and the medical profession, except in case of emergency, until after the proposed regulation has been published, and until after copies have been furnished interested parties who have filed requests for such service, nor until after such parties and

others interested have been given an opportunity to submit their views.

Adopted May 16, 1923. C. A. Thompson, Secretary.

**RESOLUTION** as to Training Ex-Soldiers by the Veterans Bureau, as Chiropractors, under the delusion that they are training said ex-soldiers to a useful and honorable profession or vocation.

**WHEREAS**, it has come to the attention of the People of the State of Oklahoma that the United States Veterans Bureau is training veterans of the late war as chiropractors, in spite of the many protests lodged with the Bureau against such practice, by the American Medical Association at its St. Louis Meeting, and by various state Medical associations, therefore, be it

**RESOLVED**, that the House of Delegates of the Oklahoma State Medical Association, in annual session assembled, representing over 1500 legally qualified physicians, adequately trained in the arts and sciences (the only foundation for the recognition, control and prevention of disease), approves the sentiments expressed in the protests of the American Medical Association above referred to, against the training of veterans as chiropractors by the Veterans Bureau, and hereby directs that the proper officers of the Oklahoma State Medical Association memorialize and petition the Federal government, particularly those officers charged with the responsibility for the rehabilitation of disabled ex-service men, and to take such action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training, which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall, at least, meet the requirements and shall receive such adequate training as is defined in the classification of medical schools of the American Medical Association, known as Class A, or acceptable medical schools—a standard which is approved by all right-thinking people moved by a desire for public welfare.

Adopted May 16, 1923. C. A. Thompson, Secretary.

The following resolution affecting scientific sections was adopted:

**WHEREAS**, as the Section on Surgery and Gynecology are disproportionately large, and **WHEREAS**, Obstetrics and Gynecology are closely related, both from a practical and scientific standpoint, and Pediatrics is closely related to General Medicine;

**BE IT RESOLVED**, that the matter of

a rearrangement of these Section be submitted to the Chairmen of the various Sections."

Approved by the House. Submitted by Dr. A. V. Emerson, Tulsa.

Telegrams were received by the House from the Southern Medical Association.

The election of Officers, held as the first order of business on the morning of May 16, resulted as follows:

President-elect, E. S. Lain, Oklahoma City.

1st. vice-pres., Chas. H. Ball, Tulsa.

2nd vice-pres., A. L. Blesh, Oklahoma City.

3rd vice-pres., G. S. Baxter, Shawnee.

Secretary, Treasurer, Editor, Dr. Claude A. Thompson, Muskogee.

Councillors—

2nd District, Dr. A. H. Bungardt, Cordell (Term expires 1926)

4th District, Dr. J. T. Slover, Sulphur (Term expires 1926)

7th District, Dr. G. A. Wall, 607 Palace Building, Tulsa (Term expires 1926)

Delegates to the A. M. A., McLain Rogers, Clinton (1924-1925)

Meeting place for 1924, Ardmore, Oklahoma.

#### REPORT. JOINT SESSION, SPECIAL MEETING OF THE COUNCIL AND HOSPITAL COMMITTEE, HOTEL TULSA, MAY 16, 1923.

Present:

Drs. McLain Rogers, Clinton, President, Oklahoma S. M. A.; Walter Bradford, Shawnee and G. A. Wall, Tulsa, Councilors; Claude A. Thompson, Muskogee, Secretary-Treas.-Editor Oklahoma S. M. A.; C. M. Rosser, President, Baylor University, Dallas, Texas; E. S. Lain, Oklahoma City, President-elect; Oklahoma S. M. A.; Fred S. Clinton, Tulsa, President, Oklahoma Hospital Association and Chairman, Hospital Committee, Oklahoma S. M. A.; Roy W. Dunlap, President, Tulsa County Medical Society; LeRoy Long, Dean, Medical Department, University of Oklahoma; S. S. Glasscock, Kansas City, Kansas; A. S. Risser, Blackwell, President, Blackwell Hospital.

Dr. Rogers stated that the purpose of the joint meeting was the organization of some type of committee, which would outline a definite policy as to constructive medical legislation.

Fred S. Clinton, Tulsa, was made Chairman; Walter Bradford, Shawnee, Secretary.

Dr. Clinton addressed the meeting on constructive legislation, introducing Dr. C. M. Rosser, Dallas, who addressed the body, advising them of what his idea was as to

the steps Oklahomans should take as to medical legislation. He termed some of the "Cults" and "Isms" just now attempting to break into the medical profession by the easiest route, as "members of the **medical underworld.**" He suggested that each Councilor, visit each society in his district, inviting to the meeting, which should be arranged in advance. Mayors, City Councilmen, Heads of the Ministerial Alliance, Club Presidents, and that at that meeting the Councilor in his address should advocate for the good of all the people one **medical standard**, no sub-standard of the **medical underworld.** The Councilor, after having gained the cooperation, **if possible**, of the various people above indicated, will be in position to meet with the Legislative Committee and offer them a valuable plan or outline to follow.

Dr. Claude Thompson explained his former campaign against the Chiropractics in Oklahoma, the very great difficulty he experienced in getting any sort of cooperation from County Medical Societies and the individual physicians. He explained the present status of Chiropractors in Oklahoma as well as the various processes they had gone through to obtain the separate board they now have.

Dr. E. S. Lain spoke of the methods followed by the Oklahoma County Medical Society, answering the charge that their Society was non-cooperative, with the explanation that in their opinion, the propaganda in the form it was issued from the office of the Secretary-Editor, was too severe, too radical, etc.

Dr. Thompson then called attention to the fact that the matter was not prepared by himself but as a matter of fact was prepared in the Legal Department of the American Medical Association, the rest of it being actual reproduction of the testimony offered at state trials.

It was decided to term the organization a Judicial Council.

Dr. G. A. Wall moved that such Judicial Council call on the Council of the State Medical Association to formulate some definite policy toward constructive legislation, seconded by Dr. A. S. Risser, the motion carried.

Dr. Risser in talking "suggests that ALL must take this out to the people, not depending wholly on any central body," such as this Council.

Dr. Wall suggested that the Council consult different Clubs, Associations, Societies, men of affairs, before formulating a definite policy.

Dr. Roy W. Dunlap made a few remarks

on the Osteopath and Chiropractors and another "Cult" further down the scale, who now show up, demanding a separate board for themselves.

Dr. Clinton spoke on Dr. Rosser's suggestions and the situation in Texas.

Dr. Wall's motion was adopted. It was moved that Dr. Rosser be extended a vote of thanks for his attendance and aid.

W. C. Bradford, Secretary.

# REPORT OF SECRETARY-TREASURER-EDITOR FOR THE YEAR APRIL 30, 1922 TO MAY 1, 1923.

## To the House of Delegates, Council and Members, Oklahoma State Medical Association.

Gentlemen: In conformity with the Constitution and By-Laws I herewith submit this condensed statement of our work covering the time above indicated. For your information you are advised that a detailed statement of all transactions has been in the hands of the Council subcommittee for their information for some time, this statement also contains the report of the Auditor of the Commercial National Bank with statements of our financial condition verified by the Cashier of that institution.

### FINANCIAL STATEMENT

The Oklahoma State Medical Association,  
Dr. C. A. Thompson, Secretary and Treasurer.  
May 1, 1922 - May 1, 1923

May 1, 1922— Receipts.		
Balance on hand in Bank.....	\$	1,530.24
Advertising and Subscriptions.....		6,449.59
County Secretaries.....		6,580.75
Interest, (Liberty Bonds).....		21.25
Time Deposit Cashed.....		500.00
Medical Defense Fund.....		2,500.00
Dr. C. A. Thompson.....		450.00
	\$	18,031.83
Expenditures.		
Printing .....	\$	6,352.40
Medical Defense Fund.....		3,500.00
Secretary's Salary.....	\$	1,670.13
Salary Loan.....		450.00
Balance Last Year Salary Secretary.....		62.50
Stenographer and Clerical Work .....		1,756.10
Legislative and Delegate Expenses .....		190.47
Office Rent .....		240.00
Stamps and Postage.....		257.00
Telephone, Telegraph and Express.....		60.13
Office Supplies and Addressograph .....		346.80
Press Clippings.....		36.00
Refunds, Donations, Etc. ....		70.75
Secretary's Bond and Audit of Books.....		25.00
	\$	15,017.28
May 1, 1923, Balance on hand in bank .....		3,014.55
	\$	18,031.83
Cash on hand in bank, May 1, 1923 .....	\$	3,014.55
Liberty Bond (2nd 4 1-2) .....		500.00
Total Assets, Oklahoma State Medical Association .....	\$	3,514.55

## THE MEDICAL DEFENSE FUND

## Financial Statement

May 1, 1922 - May 1, 1923.

## Receipts.

May 1, 1922—	
Balance on hand in bank.....	\$ 317.32
Time Deposit, cashed.....	500.00
Oklahoma State Medical Association....	150.00
Okla. State Med. Assn. (transfer).....	1,000.00

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\$ 1,967.32

## Expenditures.

Attorney's Fees, paid.....	\$ 1,384.94
Oklahoma State Medical Association....	150.00

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\$ 1,534.94

May 1, 1923, Balance on hand in bank..	432.38
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\$ 1,967.32

May 1, 1923, Balance on hand in bank.	\$ 432.38
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Time Deposit, 4%:

1 C. D. ....	\$ 2,000.00
1 C. D. ....	1,500.00
1 C. D. ....	650.00

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\$ 4,150.00

Total, Medical Defense Fund.....	4,582.38
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Total, Oklahoma State Medical Assn....	3,514.55
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Grand Total Assets.....	\$ 8,096.93
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(Signed) H. A. Lewis, Auditor.

Muskogee, Oklahoma

May 2, 1923.

## TO WHOM IT MAY CONCERN:

We hereby certify that there was to the credit of the Oklahoma State Medical Association, at the close of business, May 1, 1923, the sum of \$3014.55, and we were holding for safe keeping one Second Liberty Loan bond for \$500.00.

Yours very truly,

(Signed) G. T. Thompson, Cashier.

Commercial National Bank,

Muskogee, Okla.

## TO WHOM IT MAY CONCERN:

We hereby certify that there was on deposit to the credit of the Medical Defense Fund, C. A. Thompson, Secretary, at the close of business, May 1, 1923, on Certificates of Deposit, \$4150.00, on open account \$432.38.

Yours very truly,

(Signed) G. T. Thompson, Cashier.

Commercial National Bank,

Muskogee, Okla.

## MEDICAL DEFENSE

This department of our work, as ever, has been productive of more trouble and misunderstandings than probably all other features combined. It is still impossible to deny a member defense, without there being left an unpleasant situation. In more than one instance, since our last report, members lapsed their 1923 membership while their cases were being defended by the Association's attorneys. We take this

occasion to call attention to the fact that whenever a member's defense is undertaken by the Association's attorneys certain obligations are at once assumed by the defending attorneys, which cannot be laid aside at the mere whim of the defendant member. The case having been passed through certain necessary phases to conform to our contracts with the attorneys and the rules of the courts, it must be carried through to its proper conclusion. A great deal of preliminary work, motions, demurrers, case recording, etc., has been done, of which the member knows nothing, especially does he not know that that work must be paid for, regardless of what anyone thinks about it. For this reason the Medical Defense Committee strongly urges that application for defense not be made unless there is actual need for it. It calls for an unnecessary waste of money which may be avoided at times by the use of a little patience. The Committee also, again, notes the disposition of members to undertake the settlement of their own cases without the slightest consultation or advice to the Association's attorneys of such move. This is often done through panic, or acceptance of poor and inefficient advice. It invariably leaves the Association in an embarrassing situation through no fault of its own, but through disregard and discourtesy on the part of the defendant physician we have been attempting to aid. We again call attention to the unnecessary waste we are called to suffer, whenever one of our members is adequately protected through possession of an indemnity policy, protected in every detail as to costs of his suit and any possible judgment against him, insists that the Medical Defense Fund undertake his defense in addition thereto, all of which is very foolish waste. One almost invariable feature of this class of cases is also noted, wherein, on the final conclusion of the case the defendant physician is found following the advice of his indemnity attorneys, settling the case to save that company a little money, when as a matter of fixed principle the case should be contested to the bitter end, up through the Supreme Court; not particularly for the gratification of the member involved, but as much for the maintenance of a proper esprit de corps toward our entire membership. Our membership should adopt the fixed principle, with a few exceptions, of contesting to the end every case of alleged malpractice brought against us. It should become known to the legal fraternity of Oklahoma that an attack of this character against one of us is virtually an attack against all and

that we propose to so regard it and defend our interests against such injustice. Your attention is called to the significance of the facts surrounding these cases which is that it is nearly impossible to retain any attorney of high ethical character and ideals to bring these suits. We cannot conclude this statement without once more warning those of our members who sometimes thoughtlessly, either by their silence or other means of connivance, actually bring about baseless suits alleging malpractice, nearly everyone of which wind up as a court fiasco.

### ADVERTISING

The great importance and added gain to our organization, which might be had by constant cooperation on the part of our members in making their purchases of supplies from those who support us with their advertising in the JOURNAL cannot be too strongly urged. The JOURNAL attempts in every way to obtain only creditable houses as advertising supporters. Their money more than publishes our JOURNAL, so, in all fairness we should not forget them when the time for making purchases arrives. A rival house not supporting your JOURNAL with its advertising certainly should not be given your support when one equally as good offers you supplies at equal price and quality, and at the same time helps pay our monthly printing bill.

### DEATHS IN OUR MEMBERSHIP

Since making our last report it becomes a regrettable duty to note the following deaths among our members:

Dr. A. S. Crocker, Oklahoma City.  
 Dr. George S. Turner, Krebs.  
 Dr. J. E. Yarbrough, Erick.  
 Dr. T. E. Ashinhurst, Waurika.  
 Dr. L. T. Strother, Nowata.  
 Dr. T. L. Noblitt, Erick.  
 Dr. J. C. Stevens, Drumright.  
 Dr. J. W. Kerley, Cordell.  
 Dr. I. C. Talley, Red Oak.  
 Dr. Benj. Brown, Muskogee.  
 Dr. James M. McMillin, Goodwell.  
 Dr. G. T. Bray, Reed.  
 Dr. George E. Evans, Tulsa.  
 Dr. J. R. Burdick, Tulsa.  
 Dr. W. B. Pigg, Okmulgee.  
 Dr. Sessler Hoss, Muskogee.

A. S. Risser, M. D.,  
 Committee on Necrology.

Respectfully submitted,

C. A. Thompson, Sec'y.-Treas.

**SECTION ON PEDIATRICS AND OBSTETRICS** of the Oklahoma State Medical Association met according to schedule at 2 P. M. in the Board of Education Building, Tulsa, Oklahoma, on Tuesday, May 15, 1923. The Section was called to order by Dr. T. C. Sanders, Chairman, Shawnee, Oklahoma. After the chairman's address the scientific program was begun, and completed at 5 P. M. Wednesday evening, and every paper listed on the program was read, and while little regard was paid to the request for prepared discussion, the various papers aroused much intelligent and interesting discussion. The Section had the honor of entertaining Dr. Lee Dorsett of St. Louis, Mo., and hearing him present a paper upon:

### INTERNAL PODALIC VERSION: PERSONAL EXPERIENCE WITH THE POTTER METHOD.

Dr. Dorsett has evidently perfected himself in the technique of the Potter method of internal podalic version and extraction, but does not employ it as Dr. Potter does. In other words, he does not do it routinely, but observes indications and contra-indications. His lantern slides were of interest in showing the various steps of the Potter method. The discussion of essayist's paper by Doctors W. W. Wells, Oklahoma City; A. C. Hirschfield, Oklahoma City; George R. Osborn, Tulsa; C. V. Rice, Muskogee; Clark of Coalgate; and Dick Lowery, Oklahoma City, were generally complimentary, although all the discussants who mentioned the anaesthetic were of the opinion that chloroform anaesthesia was the only point in the technique of the Potter method that might be dispensed with, and it was the consensus of opinion both from theory and experience that ether alone or nitrous and oxygen supplemented by ether, were the preferable anaesthetics, inasmuch as they are safer and greater skill is necessary in the administration of chloroform anaesthesia, and that sufficient relaxation of the uterus can be secured with the aforesaid anaesthetics, when properly administered.

Dr. W. W. Wells of Oklahoma City, when he had completed the reading of his paper upon EPISIOTOMY, called the attention of the Society to the fact that he had requested Dr. J. Winter Brown to be assigned as leader of the discussion of his paper, and had only recently learned that Dr. Brown on account of an operation for a brain tumor had become incapacitated for practice, and had left Tulsa. He moved that the Section adopt resolutions expressing to Dr. Brown our appreciation of his past work in the profession, and interest

in the Society, and also tendering him our sympathy and wishing him a complete recovery. These resolutions were adopted.

At the close of the scientific program, the Chairman announced to the Section that a resolution had passed the house of delegates providing for a re-arrangement of the specialties of Pediatrics, Obstetrics and Gynecology, dependent upon the approval of these specialties; the arrangement suggested being the formation of a Section on Obstetrics and Gynecology, and putting Pediatrics with General Medicine. This was voted upon and unanimously accepted.

Geo. R. Osborn, Secretary.

### REPORT OF COMMITTEE ON MEDICAL EDUCATION

Mr. President:

There is but little new for your committee to report. We believe satisfactory advance has been made during the past year. During the last session of the legislature—thanks to the energetic work of your Legislative Committee, headed by Dr. Byrum, and co-operation of the State Health Commissioner—a satisfactory medical bill was passed, carrying a provision which under the interpretation of the Board requires graduation from a Class A Medical College before being admitted to take the examination in this state. This, we believe, is as it should be.

The Legislature also appropriated \$100,000 for the purpose of building and equipping a building for medical teaching; and appropriations for the proper conduct of clinical teaching in the University School of Medicine. These appropriations, we believe, temporarily meet the present requirements of the Council on Education of the American Medical Association, in so far as teaching facilities are concerned for continuance of the Medical School as a Class A institution.

During the Legislature there was proposed a bill aimed at raising the standards of education of the nursing profession in this state. It is claimed by the members of the Nurses' Association that standards of education are so low that reciprocity with other states is impossible, and it is their desire to have a law comparable to those of surrounding states. The bill as drawn did not meet the approval of the Medical profession as a whole and was withdrawn. Your Committee believes a special committee should be appointed to co-operate with the Nurses' Association in investigating the present condition of Training Schools in the states, and recommendations

to the next Legislature of a satisfactory law regulating Training Schools and the practice of nursing in Oklahoma.

There is appended herewith a discussion of Present Tendencies in Medical Education.

Wann Langston, Chairman.

A. B. Chase.

W. A. Fowler.

### PRESENT TENDENCIES IN MEDICAL EDUCATION

Our interest in medical education may be best described by dividing it into two general topics, one of these is "Medical Education in Oklahoma" and the other one is "Medical Education in General." I will describe these topics in order given.

#### Medical Education in Oklahoma

The medical education in Oklahoma as carried out at the state university school of medicine is along the lines as set forth by the Association of American Medical Colleges and the Council on Education of the American Medical Association. We are not only complying with the letter but the spirit of these requirements as to the administration of the entrance requirements, the character of instruction and the advancement from class to class. We are trying to keep as near as possible to the maximum of these requirements as well as merely satisfying the minimum and are trying as far as our means and facilities will permit to elaborate and enlarge on the instruction along the lines indicated. In the past year we have made some additions to the faculty for the purpose of giving more individual instruction to each student and are limiting the enrollment of the medical school to such a point where we can get the maximum benefit from our equipment and facilities. Proceeding along the theory that quality rather than quantity is the best aim in the medical school, the character of the instruction has been raised so that the weak and insufficient students are automatically weeded out which means a better quality of junior and senior students. In the clinical instruction the work is arranged so that the student as far as possible has the maximum opportunity consistent with the welfare of the patient to actually get his hands on the case and his work is at all times supervised, very carefully, by the force of internes and the staff men.

The last Legislature generously appropriated money for a building for the first two years of the school of medicine to be located at Norman. The construction of this build-

ing will be begun this summer and we hope to be able to move into it the coming school year. This will greatly increase our facilities and efficiency in the work of the first two years. We had hoped to secure a building near the hospital where the whole school could be combined and where clinical material would be available to the faculty of the first two years as well as the last two in the teaching of the various branches. While we did not succeed in this it is a goal toward which we are working because it must be apparent to everyone that the Medical School can not rise to its highest point of efficiency unless this condition prevails.

### Medical Education in General

There has arisen in the last few years a great deal of dissatisfaction in medical circles with medical education as now conducted. This is only another instance of general dissatisfaction with the whole system of education from the primary grade through the whole public school system, the general criticism being that we are turning out parrots, memory sharks, rather than trained observers and thinkers and it is undoubtedly true that much of the criticism of medical education is due to the fact that the medical instructors have to deal with students improperly trained in their preliminary education. In Volume 80, No. 17, April 28th in the Journal of the American Medical Association, Dr. Clark of New York give a rather lengthy discussion and criticism of medical education and voices the general dissatisfaction which is now current. In this connection it might be well to discuss some of the specific objections and criticisms of modern medical education.

One of these criticisms is with the pre-medical work. One of the primary objects of pre-medical education was to give the medical student some idea of the fundamental sciences of which medical sciences are built. Another purpose of pre-medical education was to give the medical men some education beside that concerned in the practice of medicine. It must be realized at the outset that these are two criticisms that are more or less mutually exclusive. Therefore it is very difficult to outline a pre-medical curriculum which will satisfy both. On realizing the inadequacy of the pre-medical training in subjects like biology and chemistry there has been a growing tendency to include more and more of these subjects in the pre-medical course and of course every hour which is passed in each special subject means a reduction in the possibility of a non-medical

education and we, personally, believe that a halt should be called on requiring any more of these special sciences for the above reason. Believing that the position and function of the position as a member of society is coexistent with his position as a medical man and that part of his education should fit him for this function as well as that of treating the sick, it is necessary to call this halt. The modern language requirement is more or less of a farce for the reason that no one can gain an adequate knowledge of any foreign language with the time permitted to be of any practical value, either to enable him to read literature or any scientific subject in the foreign language and the time might be well spent on subjects like Sociology and Psychology of equal cultural value and more practical value to the student.

Another criticism of medical education is that too much is forced in the curriculum, that the student takes a heroic dose of a great many sciences and has no opportunity for any choice or selection of any special bent or special talent in any one line and it makes him rely too much on conned knowledge from text-books without any opportunity to review vital current medical literature or form any conclusions for himself.

This is a pretty difficult situation to meet because any teacher of medicine realizes that in the time allotted to students he has not the opportunity to gain a sufficient knowledge of his subject. And furthermore, the clinical teachers are continually criticizing the laboratory teachers because they find that the students do not know enough Physiology or enough Anatomy or enough of any of the other of the laboratory sciences, and the men of the laboratory branches in attempting to eliminate the possibility of this criticism are perhaps doing the wrong thing in attempting to cram more and more into the student while he is with them. But there is no guarantee that if the curriculum were shortened that the student would employ himself in the library or at the laboratory or at the bedside gaining the additional first hand information for which the time was given him and the practice of assigned readings, observations and reports has had unsatisfactory results in the attempt to have the student utilize this extra time.

Another criticism is as to the character of teachers for the medical school and most of these attacks are not on the character or unfitness of teachers but most of them are aimed at men in the first two years with non-medical degrees, a general state-

ment of the case being that a man should have an M. D. before being selected as a teacher in the medical school. The reason given for such criticism is that the man by virtue of his experience in gaining his M. D. will be able to give medical significance to his teaching. This criticism is ranked with the criticism that the men with the laboratory courses do not give clinical opinion to their teaching but this is by no means the whole story. It is perfectly evident to anyone that the man who has received a graduate degree in Anatomy or Physiology knows far more about the subject and he makes a far better teacher from that stand-point than the man who merely takes this subject in the general routine of his course and has done no extra work in this subject. Therefore, it is not the idea nor the intention nor should it devolve upon the laboratory teachers to give the medical significance to their sciences. This is clearly one of the duties of the clinical faculty, the matter is squarely put to them to take the student with the general knowledge of Anatomy and to give the medical significance based on that knowledge and if the Doctor of Medicine degree is to be insisted upon as the pre-requisite to the teaching of medicine then we should go one step farther and require that, in addition to his M. D., he should have spent at least one year at special work on that particular subject. The fact that the man has a degree of Doctor of Medicine does not ipso facto guarantee that he is fitted to teach any subject in the medical curriculum. The general impression abroad is that such a degree fits a man to teach any or all subjects in this curriculum and if the clinical teachers would assume their share of responsibility leaving it to the laboratory men to discover new facts in Anatomy and Physiology and Chemistry and to teach the students facts of these subjects so that they have a general and broad knowledge of the facts and principles, our medical students would be better trained.

One of the later requirements in medical education is the fifth year internship before receiving the M. D. degree. The necessity for this requirement is due to the quantity production of medical education. It is manifestly impossible for a class of a hundred students to get much actual handling of cases without an enormous hospital and clinical faculty so that in the case of large classes it is necessary for the clinical teaching to be more on the order of demonstrations than actual performance so that when the student is graduated he has had no experience in actual handling of

cases. If classes were small or hospitals and clinical faculties large this condition would not obtain.

### ABOLITION OF COCAINE

The following communication appeared in the London Times of March 24. The authors, Sir W. M. Bayliss and Dr. C. W. Saleeby, are among the best known medical authorities in Great Britain. This letter is of interest in this country as showing the attitude of physicians in England towards the narcotic situation there and particularly to cocaine. It is also of interest to note that credit is given to American research for the discovery of a safe substitute for cocaine.

To the Editor of The Times

"We submit that the abolition of the use of cocaine by international action is the only effective means of ending the evils to which this drug gives rise, and this is now feasible without detriment to any department of surgical practice."

The failure, everywhere, of all past or present methods of control is acknowledged. One of us has recently observed, in Montreal, the futility of the combined efforts of the police, the health authorities and the Customs officers, and he has returned to Europe to find similar failure alike in this country and in France. Montreal, it may be noted, is the headquarters for the illicit distribution of the drug in North America. It is evident, and for evident reasons, that so long as the drug is manufactured it will be misused. In the light of the experience of other countries, we are entirely skeptical of the success of the new legislation proposed by the Home Office.

The Committee on the Use of Cocaine in Dentistry reported in 1917 (Cd. 8489), suggesting further restrictive legislation. One of the present writers, serving on that Committee, did not sign the report, but appended a memorandum in which the view was expressed that, according to the evidence of leading dental surgeons, cocaine was no longer needed in dentistry, completely effective substitutes, such as cocaine, being available.

A new synthetic substitute, known for short as "butyn" has now been prepared in Chicago, and tested widely with very good results. Like procaine, it has no action on the central nervous system. A highly favorable report on its use in ophthalmic practice appeared in the British Medical Journal for January 13 last. Its introduction completes the argument advanced in 1917.

International action should, therefore, be taken to end the present manufacture of cocaine in Germany and Switzerland or elsewhere, and the cultivation of the coca plant in Peru, Java, Bolivia and other countries. The best instrument for such action, given an instructed and active public opinion in the various countries concerned, is the Opium Committee of the League of Nations. Though neither the United States nor Germany is as yet a member of the League, both of these countries are represented on the Opium Committee. We urge that our Government should give full and cogent instructions in this sense to Sir Malcolm Delevigne, the British representative on that Committee, prior to its next meeting in May. This, we are convinced, is the only way with cocaine.

We are, Sir, yours,  
W. M. BAYLISS,  
C. W. SALEEBY."

# ROSTER

## OKLAHOMA STATE MEDICAL ASSOCIATION

### 1923

#### ADAIR COUNTY

T. W. Blackburn	Stilwell
D. P. Chambers	Stilwell
R. M. Church	Stilwell
B. F. Collins	Claremore
S. R. Evans	Stilwell
B. C. Hiner	Stilwell
Jos. A. Patton	Stilwell
J. R. Reynolds	Neosho, Mo.
I. W. Rogers	Watts
R. L. Sellers	Westville
T. S. Williams	Stilwell

#### ALFALFA COUNTY

F. O. Broady	Burlington
Z. J. Clark	Cherokee
M. T. Evans	Aline
H. A. Lile	Cherokee
M. M. McCord	Helena
T. A. Rhodes	Cherokee
James Stevenson	Cherokee

#### ATOKA COUNTY

T. H. Briggs	Atoka
J. W. Crews	Stringtown
J. S. Fulton	Atoka
Murrell Pinson	Atoka
J. W. Rollins	Bentley

#### BECKHAM COUNTY

J. M. Denby	Carter
E. S. Kilpatrick	Elk City
I. A. Lee	Erick
E. R. McCreery	Erick
M. Shadid	Mangum
H. K. Speed	Sayre
J. F. Standifer	Elk City
V. C. Tisdal	Elk City
J. D. Warford	Erick

#### BLAINE COUNTY

J. S. Barnett	Hitchcock
J. W. Browning	Geary
F. R. Buchanan	Canton
M. W. Buchanan	Watonga
W. W. Gill	Watonga
W. F. Griffin	Watonga
V. R. Hamble	Okeene
Geo. M. Holcombe	Okeene
H. E. Huston	Watonga
H. M. Krebs	Eagle City
J. B. Leisure	Watonga
E. F. Milligan	Geary
L. H. Murdoch	Okeene
J. A. Norris	Okeene
A. F. Padberg	Canton
D. F. Stough	Geary

#### BRYAN COUNTY

W. H. Alder	Blue
J. R. Allen	Caddo
D. Armstrong	Durant
J. L. Austin	Durant
W. G. Austin	Mead
J. A. Bates	Kemp
P. L. Cain	Albany
Roy L. Cochran	Caddo
J. T. Colwick	Durant
C. D. Dale	Caddo
H. B. Fuston	Bokchito
C. J. Green	Durant
A. S. Hagood	Durant
John A. Haynic	Durant

F. M. Jackman	Mead
J. H. Kay	Durant
J. R. Keller	Calera
D. C. McCalib	Utica
W. H. McCarley	Colbert
H. B. McKinney	Durant
B. H. Moore	Durant
H. P. Pope	Bennington
S. W. Raines	Platter
J. L. Reynolds	Durant
H. C. Ricks	Durant
G. M. Rushing	Durant
J. P. Rutherford	Bennington
R. E. Sawyer	Durant
Jas. L. Shuler	Durant
T. F. Taliaferro	Bennington
S. M. Toney	Bokchito
C. E. Wann	Albany
A. J. Wells	Calera
C. C. Yeiser	Colbert

#### CADDO COUNTY

P. H. Anderson	Anadarko
W. C. Barton	Washington, D. C.

#### Care of Indian Office

Jesse Bird	Cement
Samuel Blair	Apache
B. D. Brown	Apache
T. J. Butler	Anadarko
Geo. C. Campbell	Anadarko
J. H. Cantrell	Carnegie
I. Ross Clark	Carnegie
George B. Coker	Cyril
F. Dinkler	Ft. Cobb
W. L. Dixon	Cement
Edward W. Downs	Hinton
M. H. Edens	Anadarko
W. T. Hawn	Binger
J. J. Henke	Hydro
A. H. Hobbs	Hinton
Charles R. Hume	Anadarko
E. L. Inman	Eakly
R. E. Johnston	Bridgeport
W. W. Kerley	Anadarko
C. W. Lane	Okanogan
Care of U. S. Indian Service, Okanogan, Wash.	
C. B. McMillan	Gracemont
C. N. Meador	Anadarko
P. L. McClure	Ft. Cobb
P. B. Myers	Apache
J. W. Padberg	Carnegie
R. D. Rector	Anadarko
F. W. Rodgers	Carnegie
M. E. Ruhl	Hydro
P. L. Sanders	Bremerton, Washington
C. E. Smith	Hinton
A. H. Taylor	Anadarko
Wade H. Vann	Cement
A. J. Willard	Cyril
R. W. Williams	Anadarko
S. E. Williams	Hydro

#### CANADIAN COUNTY

T. M. Aderhold	El Reno
H. C. Brown	El Reno
W. B. Catto	El Reno
H. A. Dever	El Reno
J. A. Hatchett	Oklahoma City
P. F. Herod	El Reno
Thomas Lane	El Reno

W. J. Muzzy.....	El Reno
C. M. Pearce.....	Calumet
J. T. Phelps.....	El Reno
J. T. Riley.....	El Reno
D. P. Richardson.....	Union City
S. S. Sanger.....	Yukon
G. W. Taylor.....	El Reno
L. G. Wolfe.....	Okarche

## CARTER COUNTY

M. S. Alexander.....	Paunco Ver, Mexico
G. W. Amerson.....	Milo
E. R. Barker.....	Healdton
J. T. Barnwell.....	Graham
F. W. Boadway.....	Ardmore
J. H. Cameron.....	Healdton
A. G. Cowles.....	Ardmore
J. L. Cox.....	Ardmore
S. DePorte.....	Ardmore
Thomas L. Dowdy.....	Wilson
A. Y. Easterwood.....	Ardmore
L. D. Gillispie.....	Berwyn
G. E. Goodwin.....	Ardmore
Walter Hardy.....	Ardmore
W. G. Hathaway.....	Lone Grove
R. H. Henry.....	Ardmore
H. A. Higgins.....	Springer
T. J. Jackson.....	Marsden
Walter M. Johnson.....	Ardmore
C. A. Johnson.....	Wilson
G. E. Johnson.....	Ardmore
Waldo C. Lain.....	Ardmore
G. L. Langworthy.....	Wilson
L. A. McComb.....	Wilson
J. C. McNees.....	Ardmore
J. R. McCracken.....	Wilson
G. W. McPherson.....	Healdton
Yulee M. Miller.....	Wirt
J. R. Pollock.....	Ardmore
W. H. Rogers.....	Wilson
W. C. Sain.....	Ardmore
J. W. Shelton.....	Ardmore
Dow Taylor.....	Woodford
P. A. Taylor.....	Healdton
F. P. Von Keller.....	Ardmore
S. W. Wilson.....	Ardmore

## CHEROKEE COUNTY

J. S. Allison.....	Tahlequah
A. A. Baird.....	Tahlequah
W. G. Blake.....	Tahlequah
T. J. Bond.....	Tahlequah
L. E. McCurry.....	Tahlequah
P. H. Medearis.....	Tahlequah
Joseph M. Thompson.....	Tahlequah

## CHOCTAW COUNTY

R. L. Gee.....	Hugo
C. H. Hale.....	Boswell
G. E. Harris.....	Hugo
Thos. Henderson.....	Ft. Towson
W. N. John.....	Hugo
Edgar Johnson.....	Hugo
V. L. McPherson.....	Boswell
J. D. Moore.....	Hugo
R. J. Shull.....	Hugo
H. H. White.....	Hugo
Reede Wolfe.....	Hugo

## CLEVELAND COUNTY

T. J. Barb.....	Norman
C. S. Bobo.....	Norman
T. M. Boyd.....	Norman
G. M. Clifton.....	Norman
B. H. Cooley.....	Norman
J. L. Day.....	Norman
Gayfree Ellison.....	Norman

J. J. Gable.....	Norman
C. W. Grady.....	Moore
D. W. Griffin.....	Norman
J. B. Lambert.....	Lexington
R. D. Lowther.....	Norman
J. B. McClure.....	Norman
W. T. Mayfield.....	Norman
J. P. Miller.....	Norman
R. E. Thacker.....	Lexington
G. W. Wiley.....	Norman
J. R. Williams.....	Norman

## COAL COUNTY

Frank Bates.....	Coalgate
W. T. Blount.....	Tupelo
J. B. Clark.....	Coalgate
R. D. Cody.....	Centrahoma
L. A. Connor.....	Coalgate
H. G. Goben.....	Lehigh
J. J. Hipes.....	Coalgate
F. E. Rushing.....	Coalgate
W. B. Wallace.....	Coalgate
H. M. Wheeler.....	Coalgate

## COMANCHE COUNTY

H. A. Angus.....	Lawton
J. T. Antony.....	Lawton
C. W. Baird.....	Medicine Park
G. S. Barber.....	Lawton
Jackson Broshears.....	Lawton
D. H. Burnett.....	Hulen
J. J. Chapman.....	Lawton
E. B. Dunlap.....	Lawton
P. G. Dunlap.....	Lawton
L. T. Gooch.....	Lawton
E. S. Gooch.....	Lawton
Fred W. Hammond.....	Lawton
J. R. Hood.....	Indianoma
C. P. Hues.....	Lawton
C. W. Joyce.....	Fletcher
G. E. Kerr.....	Chattanooga
L. C. Knee.....	Lawton
T. R. Lutner.....	Lawton
J. W. Malcolm.....	Lawton
C. W. Martin.....	Elgin
W. J. Mason.....	Lawton
W. B. Mead.....	Lawton
E. Brent Mitchell.....	Lawton
J. Allen Perisho.....	Cache
A. H. Stuart.....	Lawton

## COTTON COUNTY

C. W. Alexander.....	Temple
R. J. Dice.....	Randlett
Lloyd B. Foster.....	Walters
A. B. Holsted.....	Temple

## CRAIG COUNTY

F. M. Adams.....	Vinita
A. R. Allen.....	Welch
Louis Bagby.....	Vinita
C. P. Bell.....	Welch
J. O. Bradshaw.....	Welch
W. M. Campbell.....	Vinita
N. L. Cornwell.....	Meridian
J. W. Craig.....	Vinita
J. H. Haley.....	Vinita
P. L. Hayes.....	Vinita
A. W. Herron.....	Vinita
W. R. Marks.....	Vinita
R. L. Mitchell.....	Houston, Texas
Care of U. S. Vet. Hospital No. 25	
C. S. Neer.....	Vinita
E. A. Pickens.....	Grove
L. J. Pierce.....	Vinita
D. C. Roberts.....	Fayetteville, Ark.
426½ W. Dickson St.	
J. H. L. Staples.....	Blue Jacket
D. B. Stough.....	Vinita
Charles F. Walker.....	Grove

## CREEK COUNTY

R. I. Allen	Bristow
F. L. Artz	Kiefer
W. G. Bisbee	Bristow
C. D. Blachly	Drumright
L. S. Blachly	Drumright
O. C. Coppedge	Bristow
O. S. Coppedge	Depew
G. C. Croston	Sapulpa
C. M. Driver	Mounds
Melvin Fry	Slick
H. S. Garland	Sapulpa
J. A. Gregiore	Drumright
H. R. Haas	Sapulpa
Ben C. Harris	Sapulpa
J. W. Hoover	Sapulpa
Leon Izgur	Randalls Island, N. Y.

## Childrens Hospital

Ellis Jones	Sapulpa
C. E. Kahle	Shamrock
E. W. King	Bristow
J. B. Lampton	Sapulpa
R. E. Letherock	Drumright
P. K. Lewis	Sapulpa
W. P. Longmire	Sapulpa
W. A. Martin	Sapulpa
A. E. Martin	Bristow
J. A. Martin	Depew
J. M. Mattenlee	Sapulpa
C. L. McCallum	Sapulpa
James S. McCallister	Sapulpa
C. R. McDonald	Manford
W. J. Neal	Drumright
J. T. Price	Shamrock
G. N. Powell	Drumright
Chas. B. Reese	Sapulpa
W. P. Robinson	Sapulpa
E. W. Reynolds	Bristow
S. W. Reynolds	Drumright
Chas. T. Schrader	Bristow
Paul Sanger	Drumright
L. L. Smith	Sapulpa
W. F. Snorgrass	Bristow
B. C. Schwab	Sapulpa
O. W. Starr	Drumright
M. V. Stanley	Bristow
Roy M. Sweeney	Sapulpa
J. Clay Williams	Bristow
Geo. H. Wetzell	Sapulpa
Z. G. Taylor	Mounds
J. W. Wells	Bristow

## CUSTER COUNTY

W. I. Basinger	Butler
C. L. Brundage	Thomas
M. C. Comer	Clinton
E. E. Darnell	Clinton
J. T. Frizzell	Butler
J. Matt Gordon	Weatherford
V. M. Gore	Tucson, Ariz.

601 E. 2nd St.

K. D. Gossom	Custer City
A. J. Jeter	Clinton
Ellis Lamb	Clinton
C. H. McBurney	Clinton
Wm. J. Omer	Thomas
O. H. Parker	Custer City
McLain Rogers	Clinton
J. J. Williams	Weatherford
O. W. Wright	Putnam

## DEWEY COUNTY

Frank W. Allen	Leedy
W. E. Seba	Leedy

## ELLIS COUNTY

W. J. Bamber	Arnett
E. M. Dance	Fargo
R. L. Edmonds	Arnett
L. T. Green	Shattuck
G. E. Irvin	Gage

K. M. Kerr	Gage
O. C. Newman	Shattuck
J. W. Rollo	Shattuck

## GARFIELD COUNTY

A. Anderson	Kremlin
J. W. Baker	Enid
B. T. Bitting	Enid
George H. Boyle	Enid
L. W. Cotton	Enid
M. H. Fletcher	Hunter
Glenn Francisco	Enid
G. G. Harris	Lahoma
D. S. Harris	Drummond
Geo. Hartman	Enid
J. H. Hays	Enid
T. B. Hinson	Enid
F. H. Hudson	Enid
M. A. Keiso	Enid
W. L. Kendall	Enid
W. G. Kiebler	Enid
E. Margo	Covington
S. N. Mayberry	Enid
S. H. McEvoy	Enid
A. L. McInnis	Enid
W. B. Newell	Enid
A. S. Piper	Enid
J. T. Potter	Enid
W. H. Rhodes	Enid
D. D. Roberts	Enid
F. P. Robinson	Hillsdale
S. F. Scott	Waukomis
P. A. Smith	Enid
Roy Stone	Covington
J. R. Swank	Enid
H. A. Vandever	Enid
John Walker	Enid
J. M. Watson	Enid
A. E. Wilkins	Covington
R. H. Winger	Enid
E. J. Wolf	Waukomis

## GARVIN COUNTY

T. C. Brannum	Pauls Valley
James R. Callaway	Pauls Valley
Lewis Gaddy	Stratford
W. P. Greening	Pauls Valley
T. F. Gross	Lindsay
G. L. Johnson	Pauls Valley
A. P. Keever	Lindsay
E. H. Lain	Lindsay
J. K. Lindsey	Elmore City
N. H. Lindsey	Pauls Valley
H. P. Markham	Pauls Valley
C. P. Mitchell	Lindsay
E. E. Norvell	Wynnewood
Benj. W. Ralston	Okmulgee
M. E. Robberson	Wynnewood
J. B. Shannon	Maysville
Jas. W. Stevens	Pauls Valley
E. Sullivan	Oklahoma City

Tradesmen's Bank Building

J. W. Tucker	Lindsay
H. P. Wilson	Wynnewood

## GRADY COUNTY

J. C. Ambrister	Chickasha
H. C. Antle	Chickasha
W. R. Barry	Alex
W. J. Baze	Chickasha
Martha Bledsoe	Chickasha
W. L. Bonnell	Chickasha
U. C. Boon	Chickasha
R. C. Caldwell	Bradley
W. H. Cook	Chickasha
C. P. Cox	Ninnekah
D. S. Downey	Chickasha
L. E. Emanuel	Chickasha
F. M. Gaines	Verden
G. R. Gerard	Chickasha
P. J. Hampton	Rush Springs

A. E. Hennings	Tuttle
R. R. Hume	Minco
A. B. Leeds	Chickasha
J. S. Little	Minco
W. H. Livermore	Chickasha
S. O. Marrs	Chickasha
H. C. Masters	Minco
G. M. McVey	Verden
A. W. Nunnery	Chickasha
C. E. Putman	Tuttle
J. F. Reneger	Tuttle
A. C. White	Chickasha
L. H. Winborn	Tuttle

## GRANT COUNTY

Chas. A. Brake	Medford
I. V. Hardy	Medford
J. F. Martin	Deer Creek
B. W. Saffold	Gibbon
J. Marshall Tucker	Nash

## GREER COUNTY

C. W. Austin	Mangum
G. F. Border	Mangum
W. O. Dodson	Willow
H. W. Finley	Vinson
J. B. Hollis	Mangum
O. R. Jeter	Brinkman
J. W. Lansden	Granite
J. T. Lowe	Mangum
F. H. McGregor	Mangum
J. S. Meredith	Duke
Ney Neel	Mangum
T. J. Nunnery	Granite
L. E. Pearson	Mangum
E. M. Poer	Mangum
C. C. Shaw	Brinkman
T. L. Willis	Granite

## HARMON COUNTY

C. E. Collins	Hollis
J. S. McFadin	Hollis
Ray L. Pendergraft	Hollis
W. T. Ray	Gould
J. W. Scarborough	Gould
O. J. Street	Louis

## HASKELL COUNTY

Wm. R. Cowan	McCurtain
John Davis	Stigler
F. A. Fannin	Stigler
E. Johnston	Keota
O. H. Jones	Keota
R. E. Jones	Stigler
J. C. Rumley	Vian
R. F. Terrell	Stigler
T. B. Turner	Stigler
M. Van Metra	Keota
J. R. Waltrip	Quinton

## HUGHES COUNTY

W. D. Atkins	Holdenville
W. B. Bentley	Calvin
J. A. Bentley	Stewart
A. M. Butts	Holdenville
E. C. Byram	Holdenville
G. M. Combast	Lamar
A. L. Davenport	Holdenville
G. W. Diggs	Wetumka
T. B. Felix	Holdenville
L. J. George	Stewart
J. A. Hemphill	Wetumka
H. A. Howell	Holdenville
L. M. Lett	Dustin
J. W. Lowe	Holdenville
P. E. Mitchell	Wetumka
D. Y. McCary	Holdenville
J. F. Musser	Calvin
C. E. Parker	Dustin
J. D. Scott	Holdenville

## JACKSON COUNTY

A. E. Abernathy	Altus
R. F. Brown	Altus
R. H. Fox	Altus
E. S. Crowe	Olustee
J. B. Hix	Altus
J. E. Hollis	Altus
E. M. Mabry	Altus
L. H. McConnell	Altus
W. P. Rudell	Altus
W. E. Sanderson	Altus
C. G. Spears	Altus
J. S. Stultz	Olustee
H. R. Taylor	Eldorado

## JEFFERSON COUNTY

W. T. Andreskowski	Ryan
W. M. Browning	Waurika
D. B. Collins	Waurika
A. G. Granfill	Grady
J. I. Derr	Waurika
F. M. Edwards	Ringling
C. M. Maupin	Waurika
L. B. Sutherland	Wilson
L. L. Wade	Ryan
J. W. Watson	Ryan

## JOHNSON COUNTY

Guy Clark	Milburn
J. T. Looney	Tishomingo

## KAY COUNTY

C. W. Arrendell	Ponca City
C. J. Barker	Kaw City
Chas. L. Blanks	Ponca City
H. S. Browne	Ponca City
P. A. Edwards	Nardin
H. O. Gowey	Newkirk
R. B. Gibson	Ponca City
A. R. Hancock	Tonkawa
J. C. Hawkins	Blackwell
A. R. Havens	Blackwell
A. L. Hazen	Newkirk
J. A. Jones	Tonkawa
D. C. Kallock	Braman
W. M. Leslie	Blackwell
Allen Lowery	Blackwell
W. N. McClurkin	Ponca City
S. S. McCullough	Braman
Thos. McElroy	Ponca City
D. W. Miller	Blackwell
R. B. McKinney	Tonkawa
Geo. H. Neimann	Ponca City
C. E. Northcutt	Ponca City
A. S. Nukols	Ponca City
E. J. Orvis	Blackwell
A. S. Risser	Blackwell
W. A. T. Robertson	Ponca City
H. C. Schneck	Newkirk
H. M. Stricklin	Tonkawa
A. C. Syfert	Blackwell
L. C. Vance	Ponca City
E. E. Waggoner	Tonkawa
J. C. Wagner	Ponca City
I. D. Walker	Blackwell
B. H. Watkins	Ponca City
J. W. Werner	Newkirk
J. T. B. Widney	Kaw City
J. C. Woll	Tonkawa
V. A. Wood	Blackwell
W. A. Lockwood	Ponca City

## KIOWA COUNTY

J. D. Ballard	Mountain View
A. Barkley	Norman
J. M. Bonham	Hobart
J. R. Bryce	Snyder
M. E. Chambers	Gotebo
A. T. Dobson	Hobart
Melvin Gray	Mountain View
J. T. Hamilton	Snyder

A. H. Hathaway.....	Mountain View
J. A. Land.....	Lone Wolf
H. C. Lloyd.....	Hobart
Wm. McIlwain.....	Lone Wolf
E. P. Miles.....	Hobart
W. W. Miller.....	Gotebo
J. H. Moore.....	Hobart
J. A. Muller.....	Snyder
J. M. Ritter.....	Roosevelt
O. C. Struthers.....	Mountain View
F. E. Walker.....	Lone Wolf
J. D. Winter.....	Hobart

## KINGFISHER COUNTY

E. R. Cavett.....	Loyal
Chas. W. Fisk.....	Kingfisher
C. O. Gose.....	Hennessey
A. O. Meredith.....	Kingfisher
J. A. Overstreet.....	Kingfisher
Newton Rector.....	Hennessey
Frank Scott.....	Kingfisher
B. S. Townsend.....	Hennessey
J. D. Warrick.....	Cashion

## LATIMER COUNTY

A. C. Byars.....	Wilburton
E. L. Evins.....	Wilburton
T. L. Henry.....	Wilburton
J. F. McArthur.....	Wilburton
R. L. Rich.....	Red Oak

## LeFLORE COUNTY

James B. Beckett.....	Spiro
S. D. Bevell.....	Poteau
C. C. Billingsley.....	Cowlington
G. R. Booth.....	LeFlore
N. W. Campbell.....	Poteau
E. L. Collins.....	Panama
S. C. Dean.....	Howe
W. M. Duff.....	Braden
E. N. Fair.....	Heavener
I. T. Harbour.....	Cowlington
J. J. Hardy.....	Poteau
Harrel Hardy.....	Poteau
A. G. Hunt.....	Bokeshe
R. W. Minor.....	Williams
A. M. Mixon.....	Spiro
G. A. Morrison.....	Poteau
C. R. Morrison.....	Clayton
R. M. Sheppard.....	Talihino
J. B. Wear.....	Poteau
B. D. Woodson.....	Poteau
Earl M. Woodson.....	Poteau

## LINCOLN COUNTY

J. W. Adams.....	Chandler
F. B. Erwin.....	Wellston
P. F. Erwin.....	Wellston
J. O. Glenn.....	Stroud
C. O. Lively.....	Tryon
A. M. Marshall.....	Chandler
C. M. Morgan.....	Chandler
Levi Murray.....	Wellston
U. E. Nickel.....	Davenport
W. A. Pendergraft.....	Carney
B. F. Vaughn.....	Stroud

## LOGAN COUNTY

C. B. Barker.....	Guthrie
E. O. Barker.....	Guthrie
Pauline Barker.....	Guthrie
A. G. T. Childers.....	Mulhall
C. F. Cotteral.....	Guthrie
Dan Gray.....	Guthrie
L. A. Hahn.....	Guthrie
C. B. Hill.....	Guthrie
J. L. Houseworth.....	Guthrie
H. W. Larkin.....	Guthrie
J. L. Melvin.....	Guthrie
Wm. Miller.....	Guthrie
C. S. Petty.....	Guthrie
Louis H. Ritzhaupt.....	Guthrie

J. E. Souter.....	Guthrie
D. Stevens.....	Guthrie
F. E. Trigg.....	Guthrie
A. A. West.....	Guthrie

## LOVE COUNTY

D. Autry.....	Marietta
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## McINTOSH COUNTY

Dyton Bennett.....	Texanna
G. W. Graves.....	Hitchita
J. B. Haggard.....	Council Hill
L. I. Jacobs.....	Vivian
N. P. Lee.....	Checotah
D. E. Little.....	Eufaula
J. H. McColloch.....	Checotah
A. L. Mobly.....	Eufaula
C. H. Morris.....	Slick
A. J. Pope.....	Hanna
B. F. Rushing.....	Hanna
J. N. Shaunty.....	Eufaula
F. L. Smith.....	Fame
W. A. Tolleson.....	Eufaula
J. C. Watkins.....	Checotah
G. W. West.....	Eufaula

## McCLAIN COUNTY

J. E. Cochran.....	Byars
O. O. Dawson.....	Wayne
W. C. McCurdy.....	Purcell
I. N. Kolb.....	Blanchard
W. B. Slover.....	Blanchard
J. W. West.....	Purcell

## McCURTAIN COUNTY

N. L. Barker.....	Broken Bow
Eugene Baylis.....	Idabel
A. W. Clarkson.....	Valliant
A. S. Graydon.....	Idabel
C. R. Huckabay.....	Bristow
C. T. McDonald.....	Broken Bow
J. T. Moreland.....	Idabel
W. A. Moreland.....	Idabel
Frank Moreland.....	Shultz
R. H. Sherrill.....	Broken Bow
R. D. Williams.....	Idabel
N. D. Woods.....	Millerton

## MAJOR COUNTY

J. V. Anderson.....	Fairview
B. F. Johnson.....	Fairview
Elsie L. Specht.....	Fairview

## MARSHALL COUNTY

A. E. Ballard.....	Belton, Texas
M. D. Belt.....	Woodville
T. A. Blaylock.....	Madill
J. I. Gaston.....	Madill
W. D. Haynie.....	Kingston
J. L. Holland.....	Madill
E. F. Lewis.....	Kingston
J. H. Logan.....	Lebanon
H. E. Rappolee.....	Madill
P. F. Robinson.....	Madill
O. E. Welborn.....	Kingston

## MAYES COUNTY

J. L. Adams.....	Pryor
W. C. Bryant.....	Choteau
J. E. Hollingsworth.....	Strang
John D. Leonard.....	Strang
J. L. Mitchell.....	Pryor
B. L. Morrow.....	Salina
E. L. Pierce.....	Locust Grove
Carl Puckett.....	Pryor
Ivadel Rogers.....	Pryor
W. J. Whitaker.....	Pryor
L. C. White.....	Adair

## MURRY COUNTY

P. V. Annadown.....	Sulphur
H. C. Bailey.....	Sulphur
A. P. Brown.....	Davis
J. C. Luster.....	Davis
A. V. Ponder.....	Sulphur

W. H. Powell.....	Sulphur
J. H. Simmons.....	Sulphur
G. W. Slover.....	Slover
J. T. Slover.....	Sulphur
J. T. Wharton.....	Miami
W. H. Williamson.....	Sulphur

## MUSKOGEE COUNTY

J. R. Anderson.....	Muskogee
H. T. Ballantine, 811 Surety Bldg.....	Muskogee
J. L. Blakemore, 315 Comm. Nat. Bldg.....	Muskogee
W. D. Berry, 510 Comm. Nat. Bldg.....	Muskogee
A. E. Carder.....	Coweta
S. N. Chatterjee.....	Muskogee
R. N. Donnell.....	Muskogee
C. E. Degroot.....	Muskogee
K. M. Dwight.....	Muskogee
A. N. Ernest, 219 Ex. Nat. Bldg.....	Muskogee
Finis W. Ewing, Surety Bldg.....	Muskogee
R. C. Farris.....	Porum
A. W. Everly, 222-23 Equity.....	Muskogee
F. B. Fite, 315 Comm. Nat. Bldg.....	Muskogee
W. m. P. Fite, 315 Comm. Nat. Bldg.....	Muskogee
W. E. Floyd, 233 Surety Bldg.....	Muskogee
S. J. Fryer, 710 Surety Bldg.....	Muskogee
C. M. Fullenwider, 404 Comm. Nat.....	Muskogee
James G. Harris.....	Muskogee
A. W. Harris, 408 Surety Bldg.....	Muskogee
T. A. Hartgraves.....	Oklmulgee
R. T. Harrod.....	Keefeton
Chas. W. Heitzman.....	Muskogee
C. L. Hill.....	Sand Springs
*Maj. W. B. Hill, U. S. A., 1007 Tradesmen Nat. Bk. Bldg.....	Oklahoma City
J. I. Hollingsworth.....	Muskogee
R. N. Holcomb, 611-14 Surety Bldg.....	Muskogee
O. E. Howell.....	Oktaha
W. R. Joblin.....	Porter
Emma S. Keith, D and Dayton St.....	Muskogee
F. S. King.....	Muskogee
O. C. Klass.....	Muskogee
John E. Lee.....	Haskell
S. E. Mitchell, 811-12 Comm. Nat. Bldg.....	Muskogee
S. W. Minor.....	Boynton
G. C. Moore, 181 W. 75th St.....	New York City
Milton Morrow.....	Muskogee
W. M. Nagle, 813-15 Surety Bldg.....	Muskogee
P. P. Nesbitt, Surety Bldg.....	Muskogee
Shade D. Neely, Comm. Natl. Bldg.....	Muskogee
J. T. Nichols, 235 Equity Bldg.....	Muskogee
I. B. Oldham, 610 Surety Bldg.....	Muskogee
W. E. Pearce.....	Boynton
J. H. Plunkett.....	Wagoner
J. G. Rafter, 228 Metropolitan.....	Muskogee
Clyde Ramey.....	Haskell
John Reynolds, Masonic Bldg.....	Muskogee
C. V. Rice, 601 Comm. Nat. Bldg.....	Muskogee
H. C. Rogers, 301 Manhattan.....	Muskogee
*Col. Hugh Scott, Sold. Mem. Hosp.....	Muskogee
H. A. Scott, 413 Ex. Nat. Bldg.....	Muskogee
T. T. Shackelford.....	Haskell
J. W. Sosbee.....	Gore
G. W. Stewart, 332 Equity Bldg.....	Muskogee
A. L. Stocks, Comm. Nat. Bldg.....	Muskogee
C. A. Thompson, 508 Comm. Nat.....	Muskogee
M. K. Thompson, 402 Surety Bldg.....	Muskogee
W. T. Tilly, 708 Comm. Nat. Bldg.....	Muskogee
J. S. Vitum, 709 Comm. Nat. Bldg.....	Muskogee
Floyd E. Watterfield.....	Muskogee
F. L. Walton, Surety Bldg.....	Muskogee
J. Hutchings White, 611-14 Surety.....	Muskogee
Fred J. Wilkiemeyer, 705 Comm. Nat.....	Muskogee

\*Member by Courtesy.

## NOBLE COUNTY

R. A. Cavitt.....	Morrison
S. H. Gaines.....	Lucein
Lambert Kuntz.....	Perry
Harry McQuown.....	Red Rock

B. A. Owen.....	Perry
T. F. Renfrow.....	Billings

## NOWATA COUNTY

J. E. Brookshire.....	Nowata
E. F. Collins.....	Nowata
J. R. Collins.....	Nowata
D. M. Lawson.....	Nowata
Wm. Nairn.....	Alluwe
S. P. Roberts.....	Alluwe
J. P. Sudderth.....	Nowata
M. B. Scott.....	Delaware
J. G. Thomas.....	Alluwe
G. A. Waters.....	Lenapah
J. T. Wilkinson.....	Delaware

## OKFUSKEE COUNTY

C. M. Bloss.....	Okemah
C. C. Bombargar.....	Paden
A. M. Chambers.....	Weleetka
W. H. Davis.....	Castle
J. C. Dovell.....	Paden
N. Price Ealy.....	Castle
F. E. Hillsmeier.....	Weleetka
W. P. Jenkins.....	Bearden
J. A. Kennedy.....	Okemah
R. Keyes.....	Okemah
A. C. Lucas.....	Castle
H. A. May.....	Okemah
L. A. Nye.....	Okemah
J. M. Pemberton.....	Okemah
J. R. Preston.....	Weleetka
T. R. Preston.....	Weleetka
J. C. Pitchford.....	Shamrock
J. S. Rollins.....	Paden
L. J. Spickard.....	Okemah
A. J. Stephenson.....	Okemah
H. Wesley Yeats.....	Okemah

## OKLAHOMA COUNTY

E. P. Allen, Liberty Nat. Bldg.....	Oklahoma City
J. M. Alford, Colcord Bldg.....	Oklahoma City
Lelia Andrews, Colcord Bldg.....	Oklahoma City
W. H. Bailey, Amer. Natl Bk. Bldg.....	Oklahoma City
Ray Balyeat, 1st Nat. Bk. Bldg.....	Oklahoma City
Chas. E. Barker, 1st Nat. Bk. Bldg.....	Oklahoma City
J. V. Blair, University Hospital.....	Oklahoma City
A. L. Blesh, Patterson Bldg.....	Oklahoma City
N. Boggs, 1st Nat. Bk. Bldg.....	Oklahoma City
Floyd Bolend, Amer. Nat. Bk. Bldg.....	Oklahoma City
Rex Bolend, Amer. Nat. Bk. Bldg.....	Oklahoma City
H. C. Bradley, 132½ West Main.....	Oklahoma City
J. G. Binkley, 132½ West C.....	Oklahoma City
Thos. A. Buchanan, Care A. B. Chase.....	Oklahoma City
A. Cates, Lib. Nat. Bk. Bldg.....	Oklahoma City
J. J. Caviness, Lbty. Nat. Bk. Bldg.....	Oklahoma City
A. B. Chase, Colcord Bldg.....	Oklahoma City
H. H. Cloudman, 12½ W. 8th St.....	Oklahoma City
Cyril E. Clymer, Lbty. Nat. Bldg.....	Oklahoma City
A. J. Coley.....	Oklahoma City
Paul Crawford, Amer. Nat. Bk. Bldg.....	Oklahoma City
B. A. Cridelle, 225½ Exchange.....	Oklahoma City
S. R. Cunningham, Amer. Nat. Bk. Bldg.....	Oklahoma City
A. E. Davenport, State Capitol Bldg.....	Oklahoma City
F. A. De Mand, Colcord Bldg.....	Oklahoma City
C. R. Day, 1st Nat. Bank Bldg.....	Oklahoma City
Ed. De Meglio, 607 Colcord Bldg.....	Oklahoma City
Dr. E. F. Davis, Amer. Natl. Bk.....	Oklahoma City
Walter H. Dersch, Shops Bldg.....	Oklahoma City
W. E. Dicken.....	Oklahoma City
E. G. Earnhart, Liberty Nat. Bk. Bldg.....	Oklahoma City
R. O. Early, Shops Bldg.....	Oklahoma City
R. T. Edwards, 1st Nat. Bk. Bldg.....	Oklahoma City
E. S. Ferguson, 606 1st Nat. Bldg.....	Oklahoma City
C. J. Fishman, Amer. Nat. Bldg.....	Oklahoma City
Thos. H. Flesher.....	Edmond
W. A. Fowler, 101 E. 7th.....	Oklahoma City
S. E. Frierson, 1st Nat. Bk. Bldg.....	Oklahoma City
Geo. Fulton, Amer. Nat. Bk. Bldg.....	Oklahoma City
Fred Fulton, Amer. Nat. Bk. Bldg.....	Oklahoma City

Austin L. Guthrie, Amer. Nat. Bldg.....Okla. City	M. E. Stout, Patterson Bldg.....Oklahoma City
K. Haas.....Harrah	Earnest Strader, Lbty. Nat. Bk. Bldg.....Okla. City
Clark H. Hall, 1st Nat. Bk. Bldg.....Oklahoma City	S. P. Strother, 408 Patterson Bldg.....Oklahoma City
J. E. Harbison, Colcord Bldg.....Oklahoma City	E. S. Sullivan, Colcord Bldg.....Oklahoma City
J. S. Hartford, 1st Nat. Bk. Bldg.....Oklahoma City	Geo. Tabor, Amer. Nat. Bk. Bldg.....Oklahoma City
Paul Haskett, 1st Nat. Bk. Bldg.....Oklahoma City	C. B. Taylor, 1st Nat. Bk. Bldg.....Oklahoma City
B. A. Hayes, Amer. Nat. Bk. Bldg.....Oklahoma City	W. M. Taylor, 1st Nat. Bk. Bldg.....Oklahoma City
John Heatley, Lbty. Nat. Bk. Bldg.....Oklahoma City	H. C. Todd, 507 Colcord Bldg.....Oklahoma City
J. W. Henry, Amer. Nat. Bk. Bldg.....Oklahoma City	Cary W. Townsend, 1st Nat. Bk. Bldg.....Okla. City
Fred B. Hicks, Amer. Nat. Bk. Bldg.....Okla. City	E. L. Underwood, 1st Nat. Bk. Bldg.....Okla. City
G. W. Hinchee, 225 W. 5th.....Oklahoma City	Curt Von Wedel, Amer. Nat. Bk. Bldg.....Okla. City
A. C. Hirschfield, Amer. Nat. Bk. Bldg.....Okla. City	W. J. Wallace, Shops Bldg.....Oklahoma City
J. R. Holliday, Amer. Nat. Bk. Bldg.....Okla. City	T. G. Walls, 1st Nat. Bk. Bldg.....Oklahoma City
W. F. Hooper, 2209 Exchange Ave.....Oklahoma City	Eva Wells, Lbty. Nat. Bk. Bldg.....Oklahoma City
R. M. Howard, 1st Nat. Bk. Bldg.....Oklahoma City	W. W. Wells, Lbty. Nat. Bk. Bldg.....Oklahoma City
W. J. Jolly, Lbty. Nat. Bk. Bldg.....Oklahoma City	A. K. West, Terminal Bldg.....Oklahoma City
E. L. Jones, 204 Security Nat. Bldg.....Okla. City	L. M. Westfall, Amer. Nat. Bk. Bldg.....Okla. City
John H. Kelly, Amer. Nat. Bk. Bldg.....Okla. City	Arthur W. White, 301 Shops Bldg.....Oklahoma City
S. E. Kernodle, 199 W. 5th.....Oklahoma City	M. W. Weir, Colcord Bldg.....Oklahoma City
John F. Kuhn, 1st Nat. Bk. Bldg.....Oklahoma City	Arthur Will, Shops Bldg.....Oklahoma City
W. A. Lackey.....Oklahoma City	H. M. Williams, Lbty. Nat. Bk. Bldg.....Okla. City
E. S. Lain, Patterson Bldg.....Oklahoma City	Ennis C. Wilson, Shops Bldg.....Oklahoma City
W. M. Langsford, 1st Nat. Bk. Bldg. Oklahoma City	Kennith Wilson, Lbty. Nat. Bk. Bldg.....Okla. City
Wann Langston, University Hospital.....Okla. City	W. K. West, Terminal Bldg.....Oklahoma City
N. E. Lawson, 314 Colcord Bldg.....Oklahoma City	A. D. Young, 1st Nat. Bk. Bldg.....Oklahoma City
Clarence E. Lee, Amer. Nat. Bk. Bldg. Okla. City	
LeRoy Long, Colcord Bldg.....Oklahoma City	
R. D. Long, Lbty. Nat. Bk. Bldg. Oklahoma City	
T. R. Longmire, 322½ N. Bdwy.....Oklahoma City	
R. E. Looney, 1st Nat. Bk. Bldg.....Oklahoma City	
R. S. Love, Amer. Nat. Bk. Bldg. Oklahoma City	
Dick Lowry, Amer. Nat. Bk. Bldg. Oklahoma City	
Tom Lowry, Amer. Nat. Bk. Bldg. Oklahoma City	
J. T. Martin, Lbty. Nat. Bk. Bldg. Oklahoma City	
J. H. Maxwell, 1st Nat. Bk. Bldg. Oklahoma City	
Earl D. McBride, 1st Nat. Bk. Bldg.....Okla. City	
R. S. McCabe, 218 1st Nat. Bk Bldg.....Okla. City	
J. C. McDonald, Patterson Bldg.....Oklahoma City	
D. D. McHenry, Colcord Bldg.....Oklahoma City	
J. H. Messenbaugh, Colcord Bldg.....Oklahoma City	
Ralph E. Meyers, St. Anthonys Hospital.....Okla. City	
W. H. Miles, City Hall.....Oklahoma City	
Ellis Moore, Shops Bldg.....Oklahoma City	
L. J. Moorman, 1st Nat. Bk. Bldg.....Oklahoma City	
Geo. La Motte, Colcord Bldg.....Oklahoma City	
J. Z. Mraz, Patterson Bldg.....Oklahoma City	
R. L. Murdock, Amer. Nat. Bk. Bldg.....Okla. City	
S. Murray, 217 Haver Bldg.....Oklahoma City	
M. H. Newman, Colcord Bldg.....Oklahoma City	
L. A. Newton, Colcord Bldg.....Oklahoma City	
Claude B. Norris, Patterson Bldg.....Oklahoma City	
N. R. Nowlin, Colcord Bldg.....Oklahoma City	
D. D. Paulus, Patterson Bldg.....Oklahoma City	
Gideon Penick, Colcord Bldg.....Oklahoma City	
J. R. Phelan, Security Nat. Bldg.....Oklahoma City	
J. S. Pine, Shops Bldg.....Oklahoma City	
Carrol M. Pounders, Lbty. Nat. Bldg. Okla. City	
J. M. Postelle, 947 W. 13th St.....Oklahoma City	
John A. Reck, Phys. Col. Bldg.....Oklahoma City	
Horace Reed, 1st Nat. Bk. Bldg.....Oklahoma City	
Lea Riely, Amer. Nat. Bk. Bldg.....Oklahoma City	
J. W. Riley, 119 W. 5th.....Oklahoma City	
John Roddy, 116 W. 5th St.....Oklahoma City	
M. M. Roland, Patterson Bldg.....Oklahoma City	
J. B. Rolater, Shops Bldg.....Oklahoma City	
W. W. Rucks, Patterson Bldg.....Oklahoma City	
L. M. Sackett, Amer. Nat. Bk. Bldg. Okla. City	
W. T. Salmon, 1st Nat. Bk. Bldg. Oklahoma City	
A. L. Solomon, Amer. Nat. Bk. Bldg. Oklahoma City	
A. J. Sands, Amer. Nat. Bk. Bldg. Oklahoma City	
Fenton M. Sanger, Security Nat. Bldg. Okla. City	
Winnie M. Sanger, Security Nat. Oklahoma City	
H. V. L. Sapper, Oil Baum Bldg. Oklahoma City	
Fred C. Sheets, Trademan Nat. Oklahoma City	
M. Smith, Colcord Bldg.....Oklahoma City	
S. N. Stone.....Edmond	
L. J. Starry, 1st Nat. Bk. Bldg. Oklahoma City	
	OKMULGEE COUNTY
	Linn Alexander.....Okmulgee
	J. E. Bercaw.....Okmulgee
	I. W. Bollinger.....Henryetta
	H. D. Boswell.....Henryetta
	Harry Breese.....Henryetta
	O. S. Burrow.....Okmulgee
	M. D. Carnell.....Okmulgee
	A. W. Coleman.....Dewar
	L. D. Conn.....Morris
	W. M. Cott.....Okmulgee
	R. J. Crabill.....Pharoah
	A. H. Culp.....Beggs
	W. D. Dawson.....Henryetta
	J. G. Edwards.....Okmulgee
	F. S. Etter.....Beggs
	J. B. Ferguson.....Okmulgee
	W. C. Griffith.....Henryetta
	O. O. Hammond.....Okmulgee
	C. A. Hicks.....Wetumka
	A. R. Holmes.....Henryetta
	W. H. Horine.....Okmulgee
	F. A. Howell.....Okmulgee
	A. G. Hughey.....Dewar
	J. O. Lowe.....Okmulgee
	T. J. Lynch.....Okmulgee
	J. C. Matheney.....Okmulgee
	G. Y. McKinney.....Henryetta
	J. A. Milroy.....Okmulgee
	J. L. Miner.....Beggs
	C. M. Ming.....Okmulgee
	W. C. Mitchener.....Okmulgee
	H. H. Monroe.....Henryetta
	J. B. Neal.....Beggs
	F. L. Nelson.....Okmulgee
	J. P. Nelson.....Schulter
	*W. B. Pigg.....Okmulgee
	J. H. Howell.....Kusa
	H. L. Rains.....Okmulgee
	D. M. Randel.....Okmulgee
	H. O. Randell.....Okmulgee
	J. C. Rembert.....Okmulgee
	John L. Riley.....Okmulgee
	Ira W. Robertson.....Henryetta
	J. C. Robinson.....Henryetta
	E. D. Rodda.....Okmulgee
	W. C. Sanderson.....Henryetta
	F. E. Sadler.....Henryetta
	T. H. Shelton.....Okmulgee
	N. N. Simpson.....Henryetta
	W. W. Stark.....Okmulgee
	L. B. Torrance.....Okmulgee
	W. C. Vernon.....Okmulgee

J. O. Wails .....	Morris	F. A. Gastineau .....	Pawnee
F. S. Watson .....	Oklmulgee	D. J. Herrington .....	Teriton
W. L. Watson .....	Oklmulgee	G. H. Phillips .....	Mt. Pleasant, Mich.
V. Wallace .....	Morris	J. A. Roberts .....	Cleveland
R. L. Westover .....	Oklmulgee	E. T. Robinson .....	Cleveland
L. B. Windham .....	Oklmulgee		
C. C. Whittle .....	Henryetta		

\*Deceased

## OSAGE COUNTY

W. H. Aaron .....	Pawhuska
E. T. Alexander .....	Bigheart
Frank Beard .....	Pawhuska
Claude S. Chambers .....	Burbank
W. W. Chase .....	Bigheart
T. J. Colley .....	Hominy
C. H. Day .....	Pawhuska
F. R. First .....	Bigheart
Thomas P. Gavan .....	Pawhuska
G. W. Goss .....	Pawhuska
O. R. Gregg .....	Pawhuska
C. H. Guild .....	Apperson
E. W. Hooper .....	Pawhuska
E. H. Lipe .....	Fairfax
C. K. Logan .....	Hominy
W. S. Mason .....	Apperson
I. C. Morris .....	Shidler
Q. B. Neale .....	Pawhuska
D. A. Shoun .....	Fairfax
J. S. Shoun .....	Fairfax
Benjamin Skinner .....	Pawhuska
A. J. Smith .....	Pawhuska
G. E. Stanbro .....	Pawhuska
B. F. Sullivan .....	Barnsdoll
H. L. Summers .....	Osage
Rosecoe Walker .....	Pawhuska
L. C. Williams .....	Pawhuska
E. K. Witcher .....	Pawhuska
Divonis Worten .....	Pawhuska

## OTTAWA COUNTY

E. A. Aisenstadt .....	Pitcher
J. D. Bewley .....	Miami
R. F. Cannon .....	Miami
L. D. Connell .....	Picher
A. M. Cooter .....	Miami
J. R. Dawson .....	Afton
Geo. A. De Tar .....	Miami
M. M. DeArman .....	Miami
T. J. Doason .....	Picher
M. W. Dolan .....	Picher
R. H. Harper .....	Afton
J. B. Hampton .....	Commerce
J. C. Jacobs .....	Miami
J. M. Lanning .....	Picher
J. F. Leslie .....	Bernice
E. A. Leisure .....	Afton
J. B. Lightfoot .....	Miami
E. D. Mabry .....	Hockerville
J. R. McKirahan .....	Picher
Chas. McCallum .....	Quapaw
Guy McNaughton .....	Miami
C. A. McLelland .....	Miami
I. Phillips .....	Picher
H. K. Miller .....	Fairland
Blair Points .....	Luther
G. Pinnell .....	Miami
Ira Smith .....	Commerce
W. B. Smith .....	Miami
W. A. Sibley .....	Cardin
L. W. Troutt .....	Afton
G. W. Taylor .....	Cardin
G. O. Webb .....	Cardin
F. L. Wormington .....	Mimai
M. P. Willis .....	Commerce

## PAWNEE COUNTY

W. E. Arnold .....	Jennings
C. W. Ballaine .....	Cleveland
C. E. Beitman .....	Skedee
J. R. Fleming .....	Keystone

## PAYNE COUNTY

J. E. Adams .....	Cushing
C. W. Bates .....	Quay
C. H. Beach .....	Glencoe
I. A. Briggs .....	Stillwater
J. H. Cash .....	Stillwater
L. A. Cleverdon .....	Stillwater
Benj. Davis .....	Cushing
W. N. Davidson .....	Cushing
E. M. Harris .....	Cushing
R. W. Holbrook .....	Perkins
J. Walter Hough .....	Cushing
W. B. Hudson .....	Yale
Eli Hughes .....	Stillwater
D. F. Janeway .....	Stillwater
H. C. Manning .....	Cushing
E. O. Martin .....	Signet
J. A. Martin .....	Cushing
W. C. Mitchell .....	Yale
J. B. Murphy .....	Stillwater
H. R. Prentiss .....	Yale
J. H. Proffitt .....	El Paso, Texas
P. M. Richardson .....	Cushing
C. E. Sexton .....	Stillwater
C. D. Simmons .....	Stillwater
L. R. Wilhite .....	Perkins

## PITTSBURG COUNTY

E. N. Allen .....	McAlester
V. H. Barton .....	McAlester
F. J. Baum .....	McAlester
R. L. Browning .....	Hartshorne
A. D. Bunn .....	Savanna
H. N. Bussey .....	Pittsburg
A. E. Carlock .....	Hartshorne
T. S. Chapman .....	McAlester
W. A. Daniels .....	McAlester
J. E. Davis .....	McAlester
Joe Dorrough .....	Indianola
J. W. Echols .....	McAlester
P. Gardner .....	Haileyville
L. E. Gee .....	Adamson
W. C. Graves .....	McAlester
A. Griffith .....	McAlester
J. O. Grubbs .....	McAlester
W. P. Hailey .....	Haileyville
C. T. Harris .....	Kiowa
J. M. Harris .....	Kiowa
W. K. Hudson .....	Hartshorne
J. C. Johnston .....	McAlester
G. A. Kilpatrick .....	McAlester
L. C. Kuyrkendall .....	McAlester
W. P. Lewallen .....	Canadian
C. F. Loy .....	Wilburton
T. H. McCarley .....	McAlester
C. A. McMehen .....	McAlester
Frank A. Miller .....	Hartshorne
J. A. Munn .....	McAlester
R. A. Munn .....	Kiowa
T. T. Norris .....	Krebs
Clara F. Palmer .....	N. McAlester
John F. Park .....	McAlester
R. K. Pemberton .....	McAlester
W. G. Ramsey .....	Quinton
O. W. Rice .....	McAlester
W. W. Sames .....	Hartshorne
J. C. Schlicht .....	N. McAlester
H. D. Shankle .....	Hartshorne
Graham Street .....	McAlester
Will C. Wait .....	McAlester
F. L. Watson .....	McAlester
J. A. Welch .....	McAlester
L. S. Willour .....	McAlester
McClellan Wilson .....	McAlester

## PONTOTOC COUNTY

W. B. Berninger.....	Allen
N. B. Breckenridge.....	Meridia, Yucatan, Mexico
Jos. G. Breco.....	Ada
Jas. R. Brown.....	Roff
Catherine Brydia.....	Ada
W. A. Bullock.....	Ada
S. L. Burns.....	Maxwell
R. T. Castleberry.....	Ada
Isham L. Cummings.....	Ada
J. R. Craig.....	Ada
B. B. Dawson.....	Ada
W. D. Faust.....	Ada
T. A. Hill.....	Roff
T. Fuller.....	Vanoos
J. L. Jeffress.....	Ada
Wilson H. Lane.....	Ada
H. D. Meredith.....	Ada
M. L. Lewis.....	Ada
M. C. McNew.....	Ada
Sam. A. McKeel.....	Ada
J. S. Miller.....	Stonewall
L. M. Overton.....	Roff
C. F. Rose.....	Allen
S. M. Richey.....	Francis
W. R. Threlkeld.....	Ada
S. P. Ross.....	Ada
J. A. Deen.....	Ada
M. M. Webster.....	Ada

## POTTAWATOMIE COUNTY

R. M. Anderson.....	Shawnee
G. H. Applewhite.....	Shawnee
M. A. Baker.....	Shawnee
G. S. Baxter.....	Shawnee
W. C. Bradford.....	Shawnee
R. A. Brown.....	Prague
J. M. Byrum.....	Shawnee
W. R. Butler.....	Maud
H. G. Campbell.....	Asher
F. L. Carson.....	Shawnee
G. R. Connally.....	Tribbey
U. S. Cordell.....	McComb
J. E. Cullom, 22 E. 15 St.....	Tulsa
J. A. Ewell.....	Shawnee
J. L. Fortson.....	Tecumseh
W. M. Gallaher.....	Shawnee
E. J. Gray.....	Tecumseh
J. E. Hughes.....	Shawnee
E. F. Hurlburt.....	Meeker
R. C. Kaylor.....	McLoud
J. W. Marshall.....	Shawnee
W. S. Martin.....	Wewoka
A. C. McFarling.....	Shawnee
W. N. McGee.....	McAllen, Texas
W. D. Phillips.....	Maud
E. E. Rice.....	Shawnee
Ed. A. Rowland.....	Norman
T. D. Rowland.....	Shawnee
T. C. Sanders.....	Shawnee
J. H. Scott.....	Shawnee
J. M. Stooksbury.....	Shawnee
J. H. Turner.....	Washington, D. C.
H. A. Wagner.....	Shawnee
J. E. Walker.....	Shawnee
J. A. Walker.....	Shawnee
A. J. Williams.....	McLoud
E. L. Yeakel.....	Shawnee

## PUSHMATAHA COUNTY

Ernest Ball.....	Ebano, S. L. P., Mexico
J. A. Burnett.....	Crum Creek
Edward Guinn.....	Antlers
B. M. Huckabay.....	Tuskahoma
H. C. Johnson.....	Antlers
J. S. Lawson.....	Clayton
E. S. Patterson.....	Antlers
George Robinett.....	Alvion

## ROGER MILLS COUNTY

B. M. Ballenger.....	Strong City
W. S. Cary.....	Rankin
J. N. Cross.....	Cheyenne

## ROGERS COUNTY

F. A. Anderson.....	Claremore
A. M. Arnold.....	Claremore
Caroline Bassman.....	Claremore
J. C. Bushyhead.....	Claremore
W. F. Hays.....	Claremore
L. H. Henley.....	Claremore
W. A. Howard.....	Chelsea
R. C. Meloy.....	Claremore
W. P. Mills.....	Claremore
T. R. Roberts.....	Catoosa
J. C. Smith.....	Catoosa
J. M. Stemmons.....	Oologah
George Strickland.....	Claremore
J. C. Taylor.....	Chelsea
B. O. Young.....	Forgan

## SEMINOLE COUNTY

W. R. Black.....	Seminole
W. T. Huddleston.....	Konawa
W. L. Knight.....	Wewoka
E. R. McAlister.....	Seminole
J. H. Perkins.....	Wewoka
M. M. Turlington.....	Seminole
P. E. Wright.....	Sasakwa

## SEQUOYAH COUNTY

E. P. Greene.....	Sallisaw
S. B. Jones.....	Sallisaw
J. A. Morrow.....	Sallisaw
T. F. Wood.....	Sallisaw

## STEPHENS COUNTY

J. P. Bartley.....	Duncan
C. T. Caraker.....	Duncan
J. B. Carmichael.....	Duncan
C. P. Chumley.....	Comanche
H. A. Conger.....	Duncan
J. P. Cowman.....	Comanche
H. C. Frie.....	Duncan
S. S. Garrett.....	Loco
C. M. Harrison.....	Comanche
W. S. Ivy.....	Duncan
D. Long.....	Duncan
A. R. Mavity.....	Marlow
A. M. McMahan.....	Duncan
J. A. Mullins.....	Marlow
J. W. Nieweg.....	Duncan
J. D. Pate.....	Duncan
S. A. Rice.....	Alma
E. B. Thomasson.....	Duncan
Geo. H. Wallace.....	Duncan
A. J. Weedon.....	Duncan
J. O. Wharton.....	Duncan
S. H. Williamson.....	Duncan

## TEXAS COUNTY

Wm. D. Akers.....	Hooker
R. B. Hayes.....	Guymon
Wm. H. Langston.....	Guymon
Daniel S. Lee.....	Guymon
W. J. Risen.....	Hooker

## TILLMAN COUNTY

C. C. Allen.....	Hollister
J. E. Arrington.....	Frederick
O. G. Bacon.....	Frederick
W. J. Brinks.....	Manitou
J. W. Collier.....	Tipton
G. A. Comp.....	Manitou
W. C. Foshee.....	Grandfield
W. A. Fuqua.....	Grandfield
J. Angus Gillis.....	Frederick
H. C. Harris.....	Grandfield
C. A. Howell.....	Oklahoma City

M. M. McKellar.....	Loveland	G. Garabedian, 615 S. Cheyenne.....	Tulsa
J. D. Osborn, Jr.....	Frederick	Algernon Sydney Garnett, 201 Ault Bldg.....	Tulsa
L. A. Mitchell.....	Frederick	D. L. Garrett, Atlas Bldg.....	Tulsa
J. C. Reynolds.....	Frederick	Paul Geissler, 123 S. Xanthus.....	Tulsa
F. G. Prestley.....	Frederick	Fred A. Glass, 723 Mayo Bldg.....	Tulsa
J. N. Ryan.....	Frederick	Samuel Goodman, 319 Roberts Bldg.....	Tulsa
F. E. Rosenberger.....	Grandfield	J. F. Gorrell, 304 Palace Bldg.....	Tulsa
T. F. Spurgeon.....	Frederick	Harry Green, 217 Atlas Bldg.....	Tulsa
A. H. Smith.....	Tipton	Ross Grosshart, 201 Wright Bldg.....	Tulsa
Harper Wright.....	Grandfield	F. S. Halm.....	Sand Springs
R. E. Wilson.....	Davidson	J. C. Halm.....	Sand Springs
TULSA COUNTY			
V. K. Allen, 306 Bliss Bldg.....	Tulsa	Bunn Harris.....	Jenks
T. P. Allison, Sand Springs.....	Tulsa	G. E. Hartshorne, 204 Bliss Bldg.....	Tulsa
C. M. Ament, 12 E. 4th St.....	Tulsa	Chas. H. Haralson, 513 Wright Bldg.....	Tulsa
Walter L. Anders, 416-17 Daniel Bldg.....	Tulsa	Thos. M. Haskins, 301 Richard Bldg.....	Tulsa
R. Q. Atchley, 315 Palace Bldg.....	Tulsa	S. DeZell Hawley, 1215 Atlas Bldg.....	Tulsa
P. N. Atkins, Wright Lab. Bldg.....	Tulsa	E. Forrest Hayden, 308 Daniel Bldg.....	Tulsa
C. H. Ball, 11 Old Daniel Bldg.....	Tulsa	F. W. Henderson, 306 Richard Bldg.....	Tulsa
J. H. Barham, 315 Daniel Bldg.....	Tulsa	C. T. Hendershot, 19 Old Daniel Bldg.....	Tulsa
J. Walter Beyer, 501 Palace Bldg.....	Tulsa	C. M. Hickey, 219 Atlas Bldg.....	Tulsa
W. W. Beesley, 215 Haver Bldg.....	Tulsa	H. L. Hille.....	Collinsville
D. A. Beard, Friend-Jones Bldg.....	Tulsa	C. C. Hoke, 736 Mayo Bldg.....	Tulsa
Lyman A. Barber, 213 Richard Bldg.....	Tulsa	O. M. Holliday, 734 Mayo Bldg.....	Tulsa
J. Jeff Billington, 327 N. Tacoma.....	Tulsa	J. S. Hooper, 106 Unity Bldg.....	Tulsa
C. E. Bradley, 502 Daniels Bldg.....	Tulsa	M. A. Houser, 200 Robinson Bldg.....	Tulsa
F. M. Boso, 214 Daniel Bldg.....	Tulsa	Walter A. Huber, 7 Old Daniel Bldg.....	Tulsa
J. C. Brogden, 736 Mayo Bldg.....	Tulsa	Lawson Hughes.....	Collinsville
James C. Braswell, 736 Mayo Bldg.....	Tulsa	Austin Hutchinson.....	Bixby
H. S. Browne, 201 Atlas Bldg.....	Tulsa	L. T. Jackson, 212½ S. Main.....	Tulsa
J. Winter Brown, 313 Elm Street Grove City, Penn.	Tulsa	Chas. D. Johnson, 201-7 Atlas Bldg.....	Tulsa
J. M. Buchanan.....	West Tulsa	R. R. Johnson.....	Sand Springs, Okla.
J. P. Butcher, 204 Robinson Bldg.....	Tulsa	H. B. Justice, 202 Robinson Bldg.....	Tulsa
G. H. Butler, 315 Palace Bldg.....	Tulsa	M. C. Kimball, 209 Security Bldg.....	Tulsa
C. E. Calhoun, Sand Springs.....	Tulsa	J. H. Laws.....	Broken Arrow
Hubert W. Callahan, 1411 S. Newport.....	Tulsa	W. G. Lemmon, 416 N. Daniel Bldg.....	Tulsa
Jas. M. Cannon, 220 Atlas Bldg.....	Tulsa	Morris Lhevine, 214 Atlas Bldg.....	Tulsa
L. H. Carleton, Oklahoma Hospital.....	Tulsa	C. P. Linn, 519 Palace Bldg.....	Tulsa
P. N. Charbonnet, 603 Wright Bldg.....	Tulsa	P. A. Mangan, 713 Mayo Bldg.....	Tulsa
H. C. Childs, 730 Mayo Bldg.....	Tulsa	Bertha Margolin, Springer Apts.....	Tulsa
J. W. Childs, 730 Mayo Bldg.....	Tulsa	N. W. Mayginnis, 200 Bliss Bldg.....	Tulsa
Fred S. Clinton, 411 World Bldg.....	Tulsa	P. H. Mayginnis, 200 Bliss Bldg.....	Tulsa
Geo. H. Clulow, 719 Mayo Bldg.....	Tulsa	W. T. McAnally, Box 2045.....	Tulsa
W. Albert Cook, 506 Palace Bldg.....	Tulsa	D. M. MacDonald, 604 S. Cincinnati.....	Tulsa
E. L. Cohenour, 413 Bliss Bldg.....	Tulsa	Malcolm McKeller, 604 S. Cincinnati.....	Tulsa
Fred Y. Cronk, 302 Daniels Bldg.....	Tulsa	B. W. McLean.....	Jenks
T. B. Coulter, 215-18 Haver Bldg.....	Tulsa	Geo. H. Miller, 215 Atlas Bldg.....	Tulsa
G. M. Davis.....	Bixby	Chas. S. Miller, 1339 E. 15th St.....	Tulsa
B. J. Davis.....	Sand Springs	J. H. Morgan, 610 Palace Bldg.....	Tulsa
Albert C. Daves, 416 Security Bldg.....	Tulsa	S. S. Mohrman, 607 Palace Bldg.....	Tulsa
Nevin J. Dieffenbach, 708 S. Cinn. St.....	Tulsa	P. G. Murray, 614 N. Daniel Bldg.....	Tulsa
W. A. Dean, 2701 E. 7th.....	Tulsa	H. D. Murdock, Wright Lab. Bldg.....	Tulsa
J. E. Dwyer, 412 Bliss Bldg.....	Tulsa	S. Murry, 215 Haver Bldg.....	Tulsa
R. W. Dunlap, 610 Palace Bldg.....	Tulsa	F. C. Myers, 302 Richard Bldg.....	Tulsa
A. V. Emerson, 733 Mayo Bldg.....	Tulsa	J. J. Nabham, 310 Richards Bldg.....	Tulsa
H. Lee Farris, Oklahoma Hospital.....	Tulsa	L. A. O'Brien.....	Skiatook
R. A. Felt, 211 Security Bldg.....	Tulsa	Geo. R. Osborne, 302 N. Daniel Bldg.....	Tulsa
M. J. Ferguson, Mexico, D. F., 5.		C. F. D. O'Hern, 212 N. Daniel Bldg.....	Tulsa
De Mayo No. 6, Despacho No. 4		T. A. Penny, Quaker Drug Store.....	Tulsa
O. A. Flanagan, 303 Haver Bldg.....	Tulsa	M. L. Perry, 545 Robinson Bldg.....	Tulsa
Geo. W. Flinn, 301 Richard Bldg.....	Tulsa	J. C. Peden, 315 Palace Bldg.....	Tulsa
Onis Franklin.....	Broken Arrow	Loren C. Presson, 304 World Bldg.....	Tulsa
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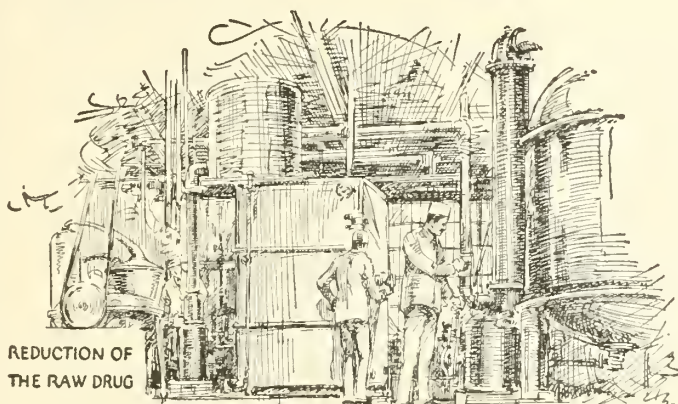
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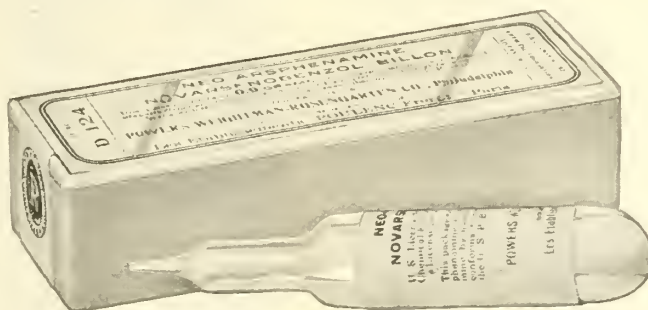


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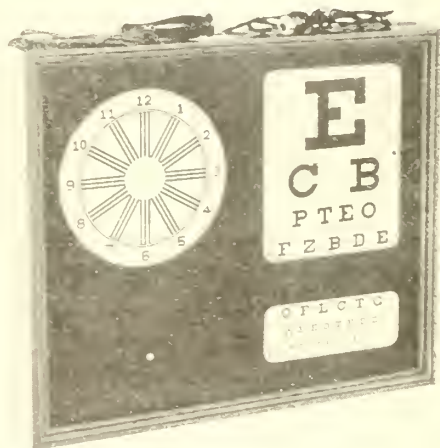
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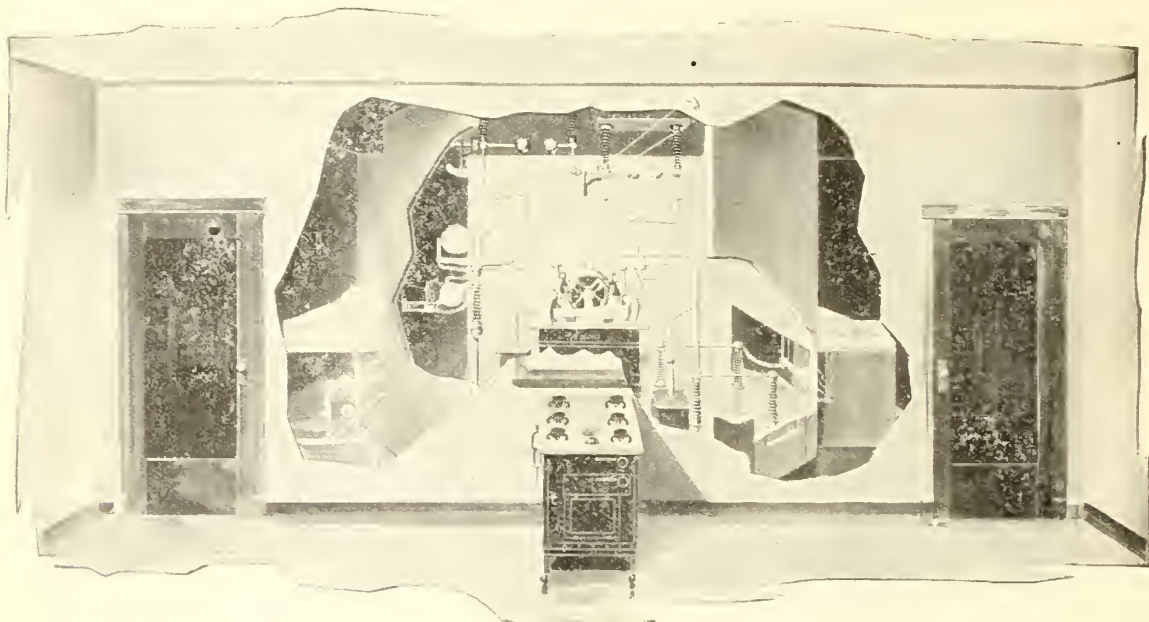
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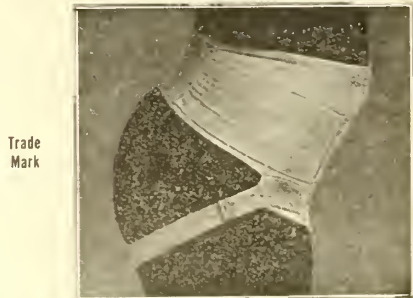
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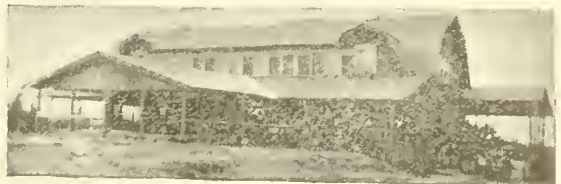
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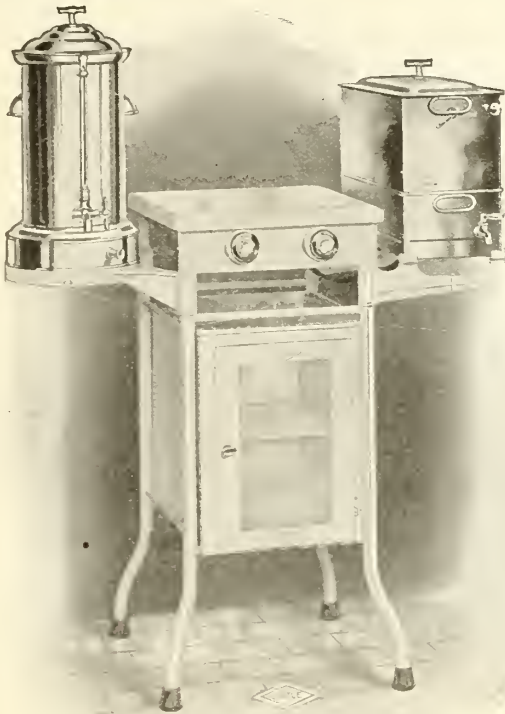
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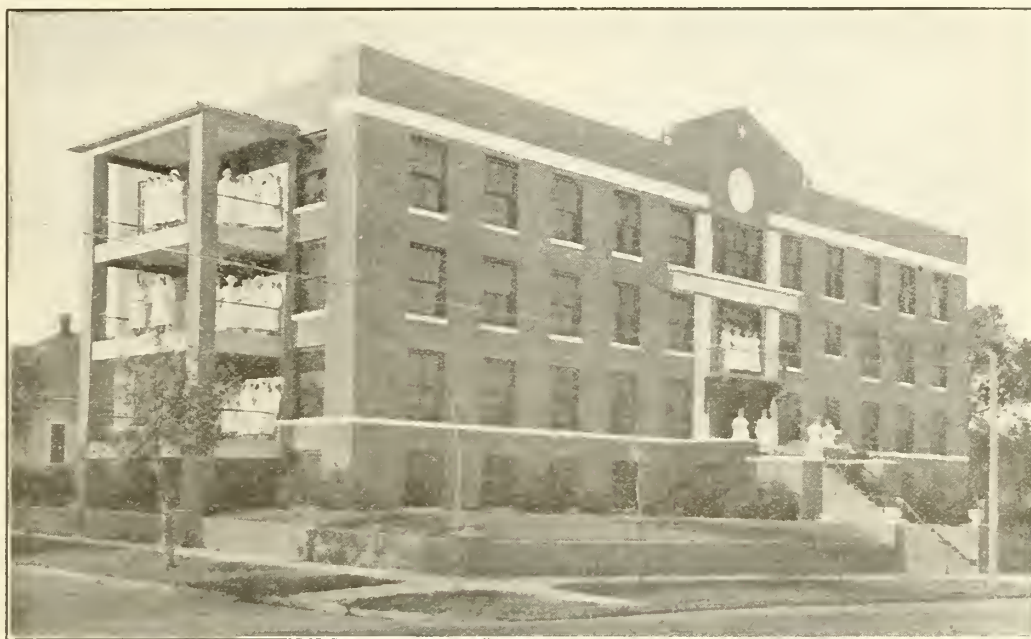
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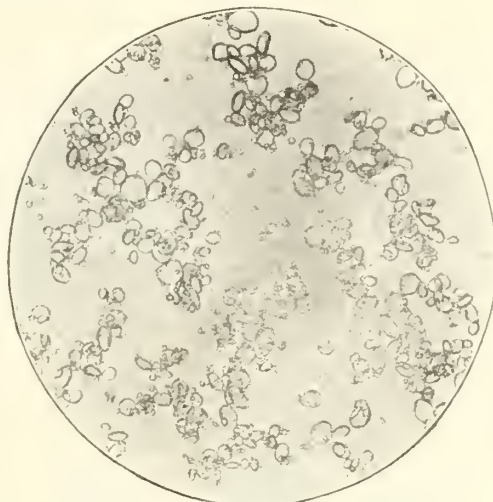
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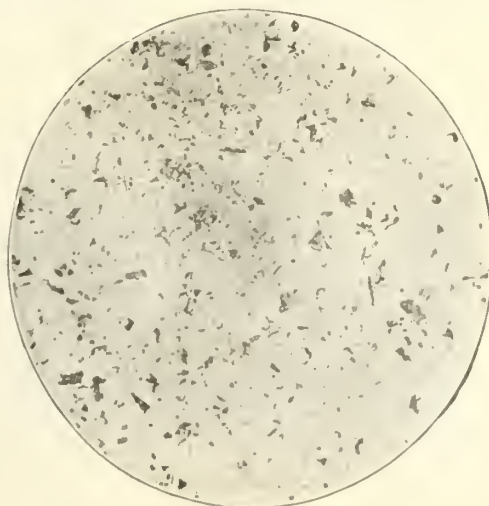
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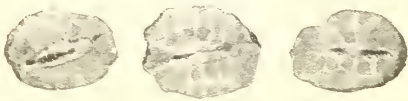
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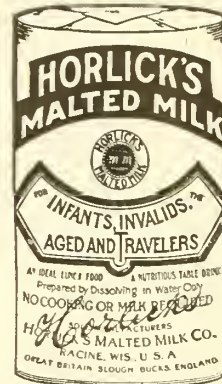
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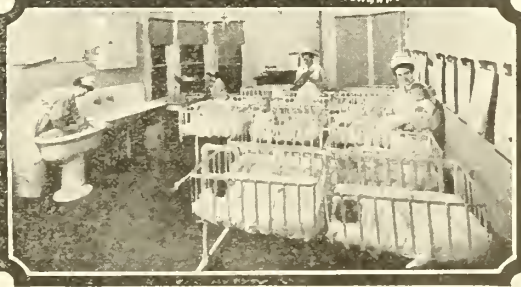


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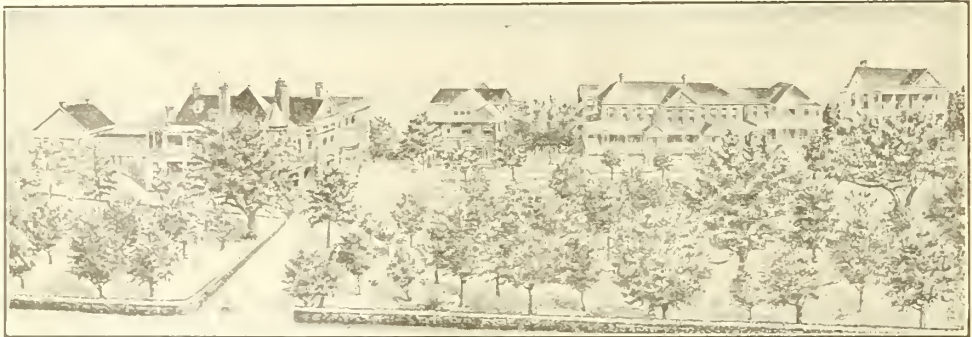
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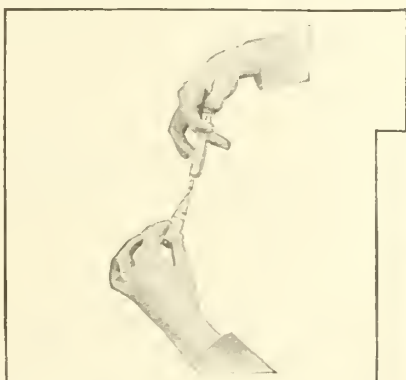
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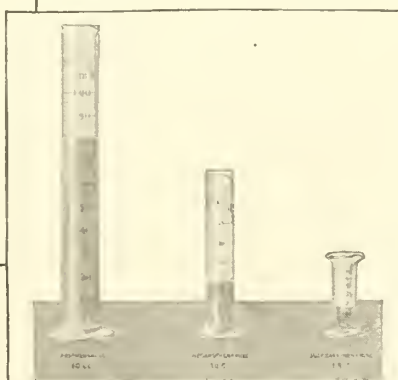
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## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., JULY, 1923

NUMBER 7

### COMBINATION OF X-RAY AND RADIUM THERAPY IN THE TREATMENT OF SUPERFICIAL MALIGNANCIES OF THE FACE.\*

S. D. NEELY, B. S., M. D.  
Muskogee, Oklahoma

At the meeting of the League of Red Cross Societies in Geneva, Switzerland, in 1920, it was conservatively estimated that in the civilized world, one and one-half million people lost their lives of cancer during the years 1914-18. The United States ranked third in frequency. Cancer is known today to rank among the first of diseases that primarily cause death. It is only rivalled by tuberculosis and syphilis.

The only treatment of cancer up until twenty years ago was surgery in selected cases. Other numerous agents were advocated and abandoned, such as pastes, acids, silver nitrate, etc. It is thought now that these agents only stimulate the growth. About that time articles appeared in the literature on the value of X-ray and radium only through experimental work at first. Surgery referred hopeless cases to the radiotherapist, and occasionally good results were obtained. Much research work has been done and remains to be done with these two potent remedies. Finally today we have statements made by leaders in this line of work that, if seen early, cancer, in some locations can be clinically cured. Radiotherapy is not, by any means, advocated as a rival to surgery, but rather as a co-worker, an adjunct. It should be borne in mind that neither method nor combination of methods will work successfully in 100 per cent of cases.

On the face there are three types of cancer recognized by pathologists as being separate and distinct. 1. Basal Celled Carcinoma, sometimes called Rodent Ulcer. 2. Squamous Celled Carcinoma. 3. Gland Celled Carcinoma. Of these three Basal

Celled is seen most frequently, is the least malignant and the last to metastasize. It is highly important to know which of the three classes a given tumor falls in, as the prognosis and amount of treatment necessary for its eradication differ.

Diagnosis: 1. Basal celled Carcinoma occurs on the skin, usually on the face. The lesion gives the following history, years of duration, probably starting from a mole, wart, seborrheic spot, burn, keratosis, naevus, etc., which has gradually increased in size, at first probably covered by a crust, which when removed bleeds easily. Later its tendency is to ulcerate, the edges are slightly raised, the center presents a crater with hard, waxy, yellowish substance contained therein. If examined closely it is usually impossible to trace any lymph node enlargement in the neighboring glands. This type is the one that yields to radiotherapy in almost every case, unless periosteum of cartilage is involved.

2. Squamous celled Carcinoma in contradistinction to Basal celled gives a much shorter course, reckoned in months, does not have the tendency to ulcerate early, but presents itself as a raised, hard, indurated nodule. Its chief location on the face is the lower and upper lip, the mucous membrane of the mouth, and occasionally the cheek and temple. If this type of tumor is treated with radiotherapy, it should certainly get the maximum dosage. It metastasizes earlier, and is therefore more malignant.

3. Gland celled Carcinoma, or medullary celled mass Carcinoma does not differ widely from Squamous celled, only in its microscopical pathology, its origin is gland cells, where the prototype of Squamous celled is one of the layers of epithelium.

Carcinoma is said to develop after middle life, or beyond the third decade. It is here that we find the skin undergoing retrogression, degeneration and atrophy. This stimulated by chronic irritation and infection by any means have led to the names of smokers lip cancer, ragged tooth cancer, etc. The caucasian race is more susceptible, and of these it can be said that the

\* Read before the Section on Genito-Urinary, Skin Diseases and Radiology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

English and Irish come first. It is rare in the American Indian. A pre-epitheliomatous skin is now recognized. It can often be seen in those people who have a tender skin, fine texture, with numerous dilated capillaries on the surface, it is redder than normal, and with a hand lens can be seen scaly, keratotic patches slightly upraised.

According to the cases seen by myself, (forty-six in number) the frequency of occurrence is as follows: Nose 15, Cheek 8, about the eye 7, the lower lip 4, the ear, neck and buccal surface of the mouth 3 each, the temple 2, and the upper lip 1. Results secured as follows: The cheek, upper lip, lower lip, temple, nose, and about the eye, comprising 37 cases, 100 per cent clinical cures. The neck 68 per cent, the buccal surface of the mouth 33 per cent, the ear 66 per cent. This makes a total of 91 per cent clinical cures ranging from two and one-half years to two months. Three of these, one ear with cartilage involved, one buccal surface of the mouth, and one neck are still under treatment. I realize that this is a short time, but they will be kept under observation as closely as is possible.

I have found that when the cartilage is involved, this makes the prognosis graver. It is known that cartilage derives its nutrition from the surrounding connective tissues, it not being supplied with blood vessels of its own. One of the theories of the curative properties of X-ray and Radium is that it produces an end-arteritis-obliterans in the blood vessels, this, so to speak, starves the growth to death. Can it be that the reason cartilage is so hard, resistant, and refuses to heal in many cases is due to its secondary blood supply, and once an end-arteritis-obliterans is produced in the surrounding tissues, the cartilage naturally suffers most. At any rate it is found practically in some cases that the surrounding skin will react, and appear normal while the cartilage will be seen to resist the skin coming over and healing. In these cases surgery acts wonderfully well in plastic work.

Another class of cases in which the prognosis is graver are those which have been treated with local caustics, as arsenic pastes, silver nitrates, etc. I have in mind a typical example, a man, age 58 years, came with a tumor the size of a walnut on his right forehead, it was classed in the basal celled variety, he said that nothing had been used on this growth, it looked typical of this type, had no surrounding lymph node involvement, no redness around the tumor. One intensive treatment over the growth

left him clinically cured, there was very little supple scar formation, no trace of the original tumor. This same man had a tumor located on his neck three inches below the level of the mandible on the left side, which I have no doubt from questioning began the same way as the one on his forehead, but this tumor had been treated with pastes, acids and what not for eight months prior to his first visit. This resulted in a tumor probably three inches in diameter, elevated one inch above the skin level, it was angry looking, the surrounding skin was red to purple color, and the center presented a distinct crater approximately one-half inch deep. There was no lymph node involvement, but of course this is impossible to say owing to its location being so near the supraclavicular space. I frankly told him that I thought him beyond this treatment as far as clinical cure was concerned, but that I would do my best. Almost one-half more ray was delivered to this growth than used on his forehead, but apparently of no avail, he did not return for follow up treatments and I think died of cancer. I do not believe that such practice is other than malicious, in stimulating a growth as this one evidently was by local means. In the Army it was a grave offense to apply any cauterizing agent to a sore on the penis without first ruling out the spirocheta pallida. Why? Genito-Urinary men will tell you that it was because this agent only helped the spirocheta over the fence, so to speak, made by the army of leucocytes that fight infection. Why not treat the lesions with mild non-irritating remedies, calamine lotion, ZnO Ung., etc., until you are sure they have proved themselves as being non-malignant, or better if a diagnosis is desired before seeking a surgeon or radiotherapist, section the tissue, this will not create half the disturbance caused by the former pet remedies.

A hard and tedious place to treat carcinoma is on the buccal surface of the mouth. In this class of cases Radium is invaluable because you can get closer to the tumor than with an X-ray tube which must be administered from the outside. It requires only slight ingenuity to make an applicator which the patient can hold in place, or tie it to his teeth, suture it in, etc. One thing must be remembered here and that is that you are not dealing with a basal celled carcinoma, but squamous celled, and intensive treatment should be administered, first because of the tumor, second because mucous membrane can stand more ray than skin. Be sure that the applicator covers all of the surface of the tumor including the hard

edges for they are as malignant as the center. I make it a rule to insist on extracting any suspicious teeth that may have been a factor in this tumor development.

If the tumor is on the eyelid, about the outer or inner canthus, in the natural fissures of the body, as the neck, the nasolabial fold radium is indispensable. It is extremely hard to adjust an X-ray tube and cone to a lesion around the eye, where it is easy with radium. If I am treating directly over the eyeball I cocaineize the eye and place a screen under the lids. This protects the cornea, and deeper structures of the eye ball.

When the periosteum of bone is involved the prognosis becomes grave, for even if you succeed in destroying the growth, there will not be any bone regeneration. Consequently plastic surgery is indicated.

I routinely ray the lymph drainage from all squamous celled carcinomas, gland celled carcinomas, and basal celled larger than a quarter using the hardest ray possible well screened. If this is rigidly practiced fewer recurrences will follow and more clinical cures necessarily obtained. I use nine-inch gap, five m. a., 10 to 12 inch distance six m. a., all filter, and vary the time from 15 to 20 minutes depending on the depth of the nodes rayed and the distance of the tube. A knowledge of lymph anatomy is absolutely essential in this work.

If the tumor has already metastasized in the lymph nodes I believe it good practice to lance the enlarged nodes with radium needles under surgical precautions. With a twelve and one-half mallig needle I have found that it can be left in the tumor one and one-half hours, providing the needles are at least one centimeter apart, without danger of slough. In this way you deliver the whole dose to the tumor directly.

Technic: I do not believe it best to treat these tumors by the fractional method. If results are obtained with this method it is because finally after continually treating, say once or twice a week, a sufficient dosage is administered. It is now known that in time any malignancy will develop an immunity to this ray, and instead of inhibiting growth it stimulates. Fractional methods appear to me to be guess work. Most any kind of ray from any X-ray tube or radium will clinically cure a small basal celled carcinoma, but it is a different story with a squamous celled or gland celled. I administer at one sitting or as near one sitting as practical, at least within three days, as much ray as I am going to give a given

tumor, and let this patient strictly alone for from three to four weeks depending on the skin reaction secured. The sooner a skin reaction appears the more violent it will be, and the proper time for it to start is in from ten days to two weeks. The normal skin should never be broken by the reaction, this reaction will fade in from three weeks to one month from the time it starts. Taking an uncomplicated case of basal celled carcinoma, I use X-ray unfiltered, making the gap as low as five or six inch. This gives you a soft ray with a cauterizing effect, and very little is delivered to the deeper tissues. If it is screened and does go down there for effect, an endarteritis-obliterans is produced. If a severe reaction is secured in this way the superficial tissues will not have as good a chance to recover as with the soft ray technic because of inhibited nutrition. I have found that a second degree reaction will heal if made with these soft rays, however, I do not say that a second degree reaction is courted in every case. Disregarding the X-ray given, I generally give a light dosage of radium lightly screened, using as much as possible the soft and hard beta ray. Lastly, make sure that all of the tumor sides are covered with the applicator, and cone, also include about one-eighth inch of normal tissue.

A question is often raised as to whether it is best to section all tumors seen or not. I do not believe, as a rule, it is best, if the patient can give a definite history of the tumor's presence for over three months, gradually growing despite local treatment, then the looks and feel of this tumor should be, in most cases, all that is desired. Suppose you do ray a few that are not malignant, on the other hand are you going to subject the patient to the chance of spreading the malignancy simply to cinch a diagnosis. If it is a chronic ulcer, other than syphilitic, the chances are that raying it will eradicate it. However, when the diagnosis is doubtful, and the treatment would be different, as anti-leucic, I would say by all means section, and take a blood wassermann. I am perfectly willing to go on and treat these without sectioned diagnosis, and believe it best.

## TUMORS OF THE BLADDER\*

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Tumors of the bladder are classified as epithelial, connective tissue and muscular in origin.

The epithelial comprises more than 90 per cent of the bladder tumors. They consist of the epithelioma, benign and malignant; the carcinoma, papillary, adeno, chirros and squamous celled.

There is the benign and the malignant papilloma. Papillomas make up more than 50 per cent of all bladder growths.

Tumor of the bladder is not an uncommon occurrence. Carcinoma of this organ occurs about one in every 200 carcinomas.

There are 100,000 deaths each year in the United States from carcinoma, therefore about 500 of these are from cancer of the bladder, and only 40 to 50 per cent of the tumors of the bladder are malignant.

If these statistics are right, then there are more than 1000 cases of tumor of the bladder found each year in the United States.

What are the symptoms? As a rule the first symptom that attracts the attention of the patient is haematuria. An individual who notices blood in the urine, practically always consults his physician, but haematuria is a common symptom of renal calculus, renal T. B., renal malignant disease, and of essential haematuria.

There are various other symptoms such as obstruction, frequent urination, pain, decomposed and foul smelling urine, septic chills, etc., however, when one stops to consider these symptoms, or any group of them that may be presented in any single case of bladder tumor, that these same symptoms might be associated equally as well in many other conditions of the bladder, that an accurate diagnosis by the means of these subjective symptoms and clinical findings, is an absolute impossibility in the great majority of cases.

The only clinical findings that are pathognomic are shreds of tumor tissue found in the urine, but unfortunately these are not often found and then it is usually late in the case. Dr. E. J. Boardman in the Canadian Medical Journal of August, 1921, states the situation in clear and concise language thus: "There is not time to enter into the pros and cons of the matter of

symptoms, because when the last word has been said, this fact remains that it is now quite generally admitted that there is no accurate clinical means of determining the source of blood in a haematuria, the source of pus in a pyuria, or the underlying cause of many obscure urinary conditions except by the aid of the cystoscope. This being the case, then neither patient nor surgeon may afford to view with complacency an attack of haematuria or be satisfied with simply having controlled the symptoms, until every means of ascertaining the underlying cause has been exhausted."

Tumors of the bladder are about four times as frequent in the male as in the female. These growths may be situated anywhere on the bladder wall, but the great majority of them are on its base, very frequently around the ureteric orifice and around the internal meatus. These tumors vary greatly in size, from that of a pea to that of a large grape fruit. The non-malignant papilloma is attached to the bladder wall by a small pedicle.

The malignant growth may be papilloma in form but is attached by a large and thicker pedicle. Some forms of carcinoma are flat and may involve a large area of the bladder wall.

The non-malignant papillomas are frequently multiple, varying from 2 to 10 or 20 in number.

During the past two years I have seen nine cases of tumor of the bladder. Two of these cases were women, both of which were malignant, and one of them died within a week. I will give briefly the history of three of these cases, which are fairly representative of all.

## Case No. 1:

Mr. M. M. McV., age 46, auctioneer. I was called in consultation by Dr. Brown of Waukomis to see this man at his home. He was complaining of severe pain with frequency and could pass but three or four drachms of urine at a time. Temp. 100, palpation over lower abdomen revealed a large filled bladder. Rectal examination indicated enlarged smooth prostate gland. A soft rubber catheter was easily passed into the bladder and about 1 1-2 pints of urine drawn. The patient was greatly relieved and slept for six or seven hours. Pain and frequency returned with only a small amount of urine passed at a time. Patient was brought to the hospital, cystoscoped, a large round smooth tumor, the size of an ordinary pear was found attached to the bladder wall, just inside of the lower border

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of the internal meatus, the pedicle about 3-8 inches in diameter. This growth was bright red, being attached by such a large pedicle, made me suspicious that it was probably malignant. So decided to do a supra-pubic cystotomy, which was done on May 1, 1922. The tumor was cut off smooth with the bladder wall and the stump thoroughly cauterized with a medium hot iron. Patient made an uneventful recovery, with no recurrence as yet. Laboratory findings of the tumor did not show any malignancy.

#### Case No. 2:

Mr. J. D. W., age 55, clerk. He was brought to my office January 19, 1923, by Dr. Hudson, the doctor stating that the patient had been passing large amount of blood in his urine the past 24 hours. The patient certainly looked it, being pale and weak, rapid pulse and sub-normal temperature. He stated that the hemorrhage had come on suddenly without pain. He was clerking in a grocery store and having a desire to urinate, noticed that the urine was a bright red blood color.

He went home to lie down, but this did not give him relief. The only symptoms that he noticed before coming to my office were a frequent desire to urinate and the bright red bloody urine. Patient also stated that about a year previous, he had had a similar attack of hematuria, but not so severe, which lasted three days then gradually disappeared. The doctor had simply prescribed some medicine and rest in bed.

Cystoscopic examination showed a small papiloma about the size of a quail's egg, attached to the bladder wall one-half inch anterior to the left ureteral orifice, which was bleeding profusely. I fulgurated the pedicle of this tumor with a fine wire which immediately controlled the hemorrhage. On further examination I found three other papilomas, two of them were attached to the trigone and one attached high up on the right side of the bladder.

At the next sitting I fulgurated the two papilomas in the trigone but could not reach with safety, with the fulgurating wire, the one which was high up on the right side. I let the patient rest for about two weeks and then succeeded in getting a snare around the remaining papiloma and slowly pinched it off. I had this papiloma sent to the laboratory, report came back benign. Patient has had no hemorrhage since.

#### Case No. 3:

Mr. C. M., age 42, farmer. He first came to my office four years ago complaining of frequent and painful urination and hav-

ing periodic hematuria about once a week, pain in the right testicle. His urine had a foul odor and was full of pus. On cystoscopic examination I found a peculiar looking growth on the right side of the bladder, which had long grayish looking dendrites, from one-half inch to one and one-half inches in length. On some of these were small blood clots. I was unable to find the right ureteral orifice, which was covered by the growth.

All these dendrites were attached to a common pedicle. I fulgurated this growth at varying intervals of from one week to two or three months apart, for a year. Patient improved and I did not get an opportunity to examine his bladder again for about a year. At that time the growth was large. Some of the dendrites were apparently two or three inches in length. The growth was so large that I advised the patient to have it surgically removed. I did not see the patient again until March, 1922. He had lost about twenty-five pounds in weight, was having septic chills once or twice a week. I passed the cystoscope but could not see anything. Finally, by elevating the scope high up in the bladder, I could get a view which indicated that the bladder was practically filled with the growth. On the following day, March 21, 1922, I did a supra-pubic cystotomy and removed a dendritic mass as large as a large grape fruit. It was so large that I had to take it out in pieces, tearing loose with my fingers. It was attached to the bladder by a pedicle one inch in length and from a half to three-quarters of an inch in width. I re-sected the pedicle and endeavored to control the hemorrhage with a medium hot iron, but without success, so was obliged to draw the margins of the resection together. Patient made a reasonably good recovery, although the incision was badly infected. He gained rapidly in flesh and strength. He called at my office again in February, 1923, stating that he was having difficulty in passing his urine. Cystopic examination showed that he had a recurrence of the same type of growth, just anterior to the scar of the previous growth. This growth was composed of probably a dozen long dendrites all attached to a common pedicle, which I am fulgurating with a fine wire.

#### Treatment:

In the non-malignant tumors I have fairly well indicated the two principle methods of treatment, fulguration and surgical interference.

About twelve years ago Dr. Edmond Beer discovered and developed a method of sure-

ly destroying the small non-malignant growths on the bladder wall by the application of the high frequency current through the cystoscope—fulguration is the term that has been applied to this method of treatment. It does away with all the danger, pain and discomfort of an open operation and makes the removal of a papiloma only a matter of a few sittings in the office.

Statistics show, and my own experience confirms that recurrences are more frequent after the operation than after fulguration. If after fulguration recurrence does take place, it does not mean another siege in a hospital, but only a few treatments in the office, with practically no loss of time on the part of the patient. Fulguration has practically no effect upon the malignant tumors.

Radium—My own experience with radium is limited to two cases of carcinoma of the bladder. Both were far advanced, the only hope of the treatment was to give temporary relief.

In one, the man, age seventy-four, being a recurrence following a prostatomy of about nine months before, I placed 25 Mg. of radium with no screen, excepting the steel case, directly into the carcinomatous mass, in the prostatic region and left it there four hours. It produced a great deal of sloughing and the patient was able to pass his urine for about two months, or to the time of his death.

There are advocates of two methods for the application of radium. One the open method, that is, through a supra-pubic cystotomy. By this method the large doses of radium can be directly applied and packed in place and kept there for any desired length of time.

With a large malignant growth, this is no doubt the better method. The great objection to this method is the danger and discomfort of the cystotomy. The second, that of the application of the radium through the urethra. By this procedure the radium is applied to the tumor by needles containing from 5 to 15 mg. of radium.

Dr. John Cunningham of Boston, Mass., describes in the April Number of "Radium" his method of plunging the radium needle through the cystoscope directly into the tumor and holding it there four to six hours. This appears to me to be a practical method of application, and one that any cystoscopist should be able to do without any great discomfort to the patient. Tumors too large for fulguration should be treated with

radium cystoscopically before resorting to surgery. If radium in the proper form can be secured.

The difficulty now is that the average urologist in private practice does not have enough of these cases to warrant his securing the radium and apparatus. It is to be hoped that the companies that handle radium for rental purposes will soon have the proper needles and apparatus for our use.

Surgery must be resorted to in the large benign tumors, such as I have described in case No. 3—and probably in all of the extensive malignant ones.

### CANCER OF THE PROSTATE\*

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In selecting cancer of the prostate as my subject for discussion, I did so with the realization that I had much less to offer in the way of cure than in the benign growth, but a great deal to offer in the way of comfort and prolongation of life in carefully selected cases. Symptomatically early cancer of the prostate is remarkably silent and is only discovered by including the prostate in the general examination of the patient. In some few cases vague urinary disturbances will lead us to examine the prostate and recognize beginning malignancy. In most every instance, however, when the patient is first seen the disease is well advanced, the clinical picture coupled with the local findings making the diagnosis comparatively easy. Unfortunately, in many of these cases, the disease is well advanced to the posterior bladder wall or seminal vesicals, rendering radical extirpation as advocated by Young impossible. It is in this type of case, however, that much may be accomplished by close study of the individual as to the amount of local involvement of the disease, the extent of obstruction, metastases, and as to the method of attack with surgery, radium, and deep X-ray therapy, alone or in combination. The incidence of cancer of the prostate to that of hypertrophy is estimated by various authors from 20 to 25 per cent. In about 65 to 75 per cent of the cases cancer is associated with benign hypertrophy.

Cancer occurs in about the same period of life as prostatic adenoma, making the age question of little value in the differential

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diagnosis, except that prostatism in the early fifties is highly suggestive of malignancy. Symptomatology of cancer of the prostate is almost identical with that of benign hypertrophy with which indeed it is often associated. Frequency, urgency, difficulty, pain and hemorrhage, with residual urine or complete retention, may be present in a combined state or separately. Pain independent of micturition is very suggestive of malignancy. In the beginning the pain may be localized in the region of the prostate, and is more or less constant, but gradually becomes referred to perineum, back, hips, and thighs. Hemorrhage as an initial symptom with or without pain, is very suggestive of malignancy. Pain along hip-joint and along sciatic nerve is the one symptom associated with malignancy in men of the prostatic age that is almost pathognomonic of cancer. Pain in back, pubic and sacral pain, are usually indicative of extensive local involvement, but may be caused by bone metastases with nerve involvement. Loss of weight and a general recent decline in health are significant symptoms of cancer of the prostate as in cancer elsewhere in the body. As a rule, this symptom occurs after the disease is fairly well advanced.

In diagnosing cancer of the prostate the size of the prostate is not of great importance. Carcinoma may exist in an atrophied prostate gland, one of normal size, or a hypertrophied gland. In fact, it has been shown that the small sclerotic type of malignant prostate is most virulent with a tendency to early metastases. Without associated pathology the malignant prostate is generally moderately enlarged. The outline of the rectal surface of the malignant prostate is irregular or nodular as compared to the regular smooth surface noted in the benign growth. Should the malignant prostate be smooth in outline, increased density is a characteristic physical finding. Prostatic calculi or an old fibroid prostate with the increased density present, will closely simulate cancer, making the differential diagnosis difficult. X-ray is a valuable aid in this differentiation revealing most calculi, occasionally outlining the prostate in cancer but of no help in the fibrous type which, in contra-distinction to the others, shows a tendency to retrogression with local treatment. Areas of stony hardness are the most important physical findings in cancer, of the prostate. These areas may occur in one or both lobes or in a single area in one lobe. In the average case the diagnosis is not difficult, the induration, irregularity, increased resistance in the inter-

vesicular space, and the extension of the process into the seminal vesicles or towards the membranous urethra being typical of malignancy. This condition shows extension beyond the confines of the prostate and while easy of diagnosis, is the one thing we are anxious to prevent. For this reason it is so important for the practitioner to pay the strictest attention to any hard nodule in the prostate and regard it as malignant until proven otherwise.

The cystoscope is of some value in diagnosing cancer of the prostate, though rectal examination furnishes more conclusive data. Irregularity about the bladder neck with contracture and a deep fixed and distorted urethra, are the usual findings noted by cystoscopic examination. In advanced cases elevation of the trigone and ulceration will be apparent, but in this condition rectal examination will also be very characteristic of the character of the disease. The cystoscope is of greatest value in determining the absence of obstruction and associated bladder conditions, type of obstruction and type of operation indicated for removal of obstruction. Metastases should be carefully looked for in all cases of carcinoma of the prostate. In about 28 per cent of the cases bone metastases occurs. The lymphatics are exceedingly prone to metastases, especially the lymphatics which drain the prostate and follow the course of the large pelvic blood vessels. X-ray of the chest, spine, pelvis, and femurs, is indicated in all cases of cancer of the prostate.

#### Treatment:

The treatment of cancer of the prostate depends on the individual operator and upon the nature and extent of the growth. We must always bear in mind two things, the treatment of the cancer, and the effect of the growth both local and remote. In early cancer of the prostate where the only physical finding in a small indurated stony hard area, with some slight urinary disturbance, with or without obstructive symptoms, perineal implantation of radium needles followed by deep X-ray therapy is the method of treatment that has given us the best results. If the obstruction is slight, the shrinkage of the prostate from the radium and deep X-ray therapy will relieve the obstruction, otherwise we do a cautery punch taking away a portion of the prostate from the bladder neck. In regard to the dosage of radium. The size of the dose somewhat depends on the involvement of the prostate. As a rule, we use four to eight needles in the perineum, each containing twelve and one-half mg. of radium,

the needles being left in for a period of 24 hours. If the degree of involvement justifies it, we implant a massive dose in the beginning using 100 mg. for 24 hours. In other cases we may use four needles making 50 mg. in 24 hours, shifting the needles at stated intervals so as to include different parts of the center of the gland. The above treatment is sometimes supplemented by urethral and rectal applications of radium which irradiate the periphery of the gland where the greatest cell activity takes place. Great care must be used in rectal irradiation. Severe proctitis with associated diarrhea and ulceration and even stricture formation may occur if the radium is not properly screened. We have several cases of early malignancy of the prostate treated as stated above with most excellent results. These patients have been under observation for a period of three to four years without any evidence of recurrence. Sacral anesthesia is ideal for needling the perineum and seldom do we find it necessary to use a general anaesthetic.

When carcinoma of the prostate is causing obstruction to urination we should remove as much of it as possible just as we would in the case of the benign growth. While in most cases we cannot hope to cure the condition, we can give a degree of comfort and palliation and actually lengthen life. A fair proportion of un-operated cases of carcinoma of the prostate are suffering from pyelonephritis and uremia just as they do in other types of urinary obstruction. Many of these cancer patients are suffering from the effects of retention and we have the same problem of elimination as in the benign growth. Toxemia may be mistaken for cachexia in some of these large obstructed types of cancer. The improvement of some of these cases under preliminary treatment, such as forced fluids, relief of retention and thorough bowel evacuation is remarkable. Some operators prefer supra-pubic drainage in this type of case with implantation of radium needles into the prostate and surrounding areas rather than perineal prostatectomy.

If a retention catheter or catheterization at intervals is intolerable, and the patient's blood chemistry is high, and the kidney function low, with associated toxemia and uremia, supra-pubic drainage is indicated, followed by perineal prostatectomy. I consider this procedure a very rare necessity as most patients will tolerate a catheter if properly handled. We have found perineal prostatectomy the operation of choice in the above type of cases for several reasons.

Cancer usually begins in the posterior lobe of the prostate and therefore can be reached to better advantage by perineal surgery, and again we do not like to open the bladder from above and expose the mucosa to transplantation of cancer cells. Furthermore, because of the fixation of the growth, it is much more accessible and more easily removed from below. Radium is imbedded into the cavity for 24 hours following removal of the prostate. We usually put 50 mg. in each side of the cavity for 24 hours. The same line of post-operative treatment administered in the benign growth is carried out. Deep X-ray treatments are given at stated intervals following prostatectomy and perineal implantation of radium needles and the use of the cautery punch is indicated if recurrence of growth gives evidence of obstruction. We have a case at present that was operated on a little over three years ago that is a splendid illustrative case of what surgery, radium, and deep X-ray therapy will accomplish in carefully selected cases. This patient had an extensive cancer of the prostate with an associated obstruction and was suffering from marked toxemia pyelonephritis and uremia. Under careful preliminary treatment, followed by perineal prostatectomy with implantation of 100 mg. of radium for 24 hours and deep X-ray therapy this patient was made comfortable and happy and when last seen was free from any recurrence of cancer. In the extensive involvements in patients having severe pains from bone metastases or nerve implications with the frightful accompanying pains very comforting palliative results are possible by means of deep X-ray therapy. If such individuals have associated obstructive symptoms with great bladder discomfort, such as pain, urgency, tenesmus and retention, the most gratifying comfort can be given by the cautery punch. We recently had a patient with extensive local involvement with bone metastases suffering from obstructive symptoms in whom operation was not advisable but relief of urinary retention was necessary. The cautery punch done at several intervals afforded this patient remarkable relief from his great bladder distress, and changed him from a constant sufferer to one of fair comfort. As in perineal radium work, sacral anaesthesia acts beautifully in this type of case.

#### Conclusions:

- (1) First essential in treatment of cancer of the prostate is early diagnosis.
- (2) Any hard lump in a man beyond middle life should be regarded as CANCER.
- (3) Early radium and X-ray treatments

must be administered.

(4) Cases with obstructive cancer not relieved by radium and X-ray need perineal prostatectomy or cautery punch, depending upon type of obstruction.

(5) A great deal of comfort may be given the severe involvements by careful therapeutics.

### ATTENUATED TYPE OF MALIGNANT EDEMA\*

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The text-book picture of malignant edema can be sketched with a few short strokes.

**DEFINITION:** A diffuse, rapidly spreading gangrenous inflammation which is due to infection with the bacillus of malignant edema, and in which the tissues become distended with gas. (Nelson).

The bacillus is a large rod, flagellated, motile, sporogenous, anaerobic, gas-producing, liquifying, gram-negative. (McFarland). It may be found in garden soil, dust, or in the intestinal canals of animals.

Polynesian savages poison their arrows and darts by dipping them into the mud-holes occupied by crabs. Their victims are overwhelmed by an infection like malignant edema. (LaGarde).

**SYMPTOMS:** Local symptoms are those of a rapid spreading gangrenous inflammation with emphysema of the tissues. The overlying skin is dark, blistered, and crackles under pressure. The wound and blebs ooze a foul fluid containing bubbles.

General symptoms are: Fulminant development of profound depression, high fever, great thirst, rapid exhaustion, delirium or apathy, followed by death in 24 to 48 hours.

The bacillus of malignant edema was discovered by Pasteur in 1875.

In the last quarter of the 19th century numerous limbs were sacrificed under the belief that a sudden puffy swelling of a foot or leg following injury or abrasion might be a developing malignant edema. (Walker).

Gould, in 1907, after exhaustive study of the literature found only five authenticated cases reported up to that time. Though radical surgical interference was the only

hope held out, I believe that none of the five cases survived.

In presenting the subject of an **attenuated** type of the same disease I claim no originality. Out of a list of cases which I think bears directly on the subject I have selected a few, the salient points of which I will recite. My experience, however, is no different than that of many others. I am giving my own experience only as a convenient vehicle in presenting the subject.

#### Case 1:

M. C. Fem., aged 16. History negative. Poor and underfed. Const. For several months before admission more or less pain in right lower quadrant during which time there were several acute exacerbations with local soreness under palpation. T. P. R. and blood-count negative.

Kept under observation for several weeks before classical appendectomy was done. Appendix long and contained faecaliths. No adhesions; no evidence of local peritonitis. Closed without drain.

Post-operative course uneventful until into the second day when clinical evidence of severe sepsis developed; rapid mounting temperature, great anxiety, swelling of the whole region of the wound which in two days burst apart liberating a foul darkish serum. The swollen edematous abdomen was by this time quite dusky and studded with blebs, and the patient well nigh exhausted. The wide area of swelling was due to edema and emphysema of the subcutaneous areolar tissue, which rapidly broke down, so that by the fifth day it was possible to introduce an irrigating tube for more than a foot in all directions. The possibility of malignant edema was mentioned on the second day, but permanently discarded soon after, simply because the patient was getting better. (This was way back in 1899, and the bacteriology was not obtained.) Three months after operation she left the hospital with a large hernia. The original operative incision was unclosed, and drainage tubes protruded from seventeen counter-incisions scattered over the abdomen, chest and right lumbar region. General condition fairly good.

I saw her again five years afterwards, sound and well except for a ventral hernia. She told me that she had run a precarious course for over a year after leaving hospital until she was treated by a doctor who irrigated the wounds with permanganate

\* Read before the Section on Surgery and Gynecology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

solution and peroxide of hydrogen. This treatment was promptly successful.

#### Case 2:

Mrs. S. S. Primipara, aged 31. Suppurative mastitis following confinement, requiring incision for drainage. Soon after incision there suddenly developed acute sepsis, extensive puffy swelling involving whole or left anterior chest wall, high fever and extreme prostration. Numerous counter incisions were made studding a wide area, all communicating eventually after sloughing out of the subcutaneous areolar tissue. Discharge dark, watery, and offensive. Though this case was treated continuously and vigorously by all manner of means the region remained in statu quo, though the general condition gradually improved. One year later the breast region was still a hot-bed of pathology; the breast was a ruined mass and the chest wall studded with excoriated drainage ports. While amputation was being seriously considered, a druggist suggested that they use peroxide for irrigation. This was done and healing was prompt and permanent.

#### Case 3:

Mrs. J. H. Married, age 28. Family and personal history not pertinent.

Had left axillary non-suppurative adenitis following an "ingrown hair" abscess attributed to shaving the arm-pit. This had subsided almost entirely when she again drew blood in shaving the same area. Her husband applied a barbers styptic pencil. Two days after there developed a severe infection with local edema and grave general symptoms. The clinical picture was soon similar to other cases recited, with the addition that the axillary glands quickly suppurated. I was told that there was a distinct difference between the pus from the glands—which was thick and yellow—and that from the blebs and cellular tissue, which was thin, dark, offensive, and contained gas bubbles. This condition had existed unimproved for three or four months when I first saw her. I treated her vigorously but unsuccessfully for a time, when she passed out of my hands. She went the rounds for over a year and by that time the picture was as follows: General condition fairly good, suffered little pain. All drainage points (some new ones) communicating; skin about drainage points excoriated. Shoulder stiff from disuse. About this time a physician advised syringing with peroxide which she did at home. Healing was prompt and permanent.

#### Case 4:

Infant A. Newborn. Ninth living child of this mother.

Born with a long tight prepuce. Attending physician obtained from his overcoat a soiled pair of hemostatic forceps which he used without sterilizing to divulse the opening which operation drew blood. About thirty hours later there appeared a smooth edema of the lower half of the belly and taking in the scrotum. The infant was hot with fever, stupid, and visibly a very sick child.

By the time it was a week old there were similar broad pones of edema on the back, both legs and one thigh. The overlying skin was dusky, but there were no blebs. The preputial opening was excoriated and oozed an offensive serum; and the scrotum looked like it were going to slough.

On the tenth day the child was clinically stronger; took nourishment well and fever down. Darkish bubbly serum with a gangrenous smell exuded from several drainage points and edema lessened. The baby succumbed to sepsis when about 25 days old. Though this case did not recover it did survive the initial sepsis.

These cases occurred between the dates of 1899 and 1906.

The bacteriology was not worked out.

Checking over the list of cases we were struck with the fact that a conspicuous number of them recovered through irrigation with peroxide. Evidently we were dealing with an anaerobe of the putrifactive gas-producing type. We took this into consideration in treating the next case.

#### Case 5:

John D., widower, laborer, aged 53. Neuropathic.

Had submitted to circumcision for cure of "chronic eczema of the penis."

The infection was a chronic recurrent moist irritation of the mucus surface of the prepuce. Very fine silk sutures were used in closing. Healing was prompt and perfect. The silk sutures cut their way out and were found adherent to the dressings on the fifth day, with the exception of one which may have been a little too deeply placed or not tied tightly enough. At any rate, about the tenth or eleventh day the patient removed this suture himself, drawing blood.

Very promptly there developed enormous edematous swelling starting at the site of circumcision and rapidly advanced until it involved the entire lower abdomen and

genitals. There was high fever and great prostration. Many incisions for drainage were freely made. In two weeks the edema had ceased to progress, swelling reduced, and patient much stronger.

It was at this time that I first saw this case.

The entire area was dusky, and the many sites of incision were excoriated and discharged a thin, darkish, offensive fluid containing air bubbles.

The surface of the scrotum was covered with blebs and several points looked like they were going to slough.

It was possible to introduce an ordinary rubber catheter into any one incision and thrust it through the rotting cellular tissue and pass out at any other drainage port. This was freely carried out so that the maximum benefit of irrigation could be secured. After thorough use of peroxide of hydrogen the whole involved area was dressed with moist application of the same. Improvement set in speedily, and healing eventually secured.

By the light of subsequent experience we now know that this case would have recovered much more rapidly if we had redressed it several times as often. This case yielded the whole gamut of pyogenic, saprophytic and putrifactive organisms. There were, however, large gram-negative gas-producing bacilli.

Quite a number of general surgeons occupied with a large industrial and casualty practice have met with the same experience perhaps in a much larger and more intelligent way. It is now recognized that malignant edema of a milder clinical type—a specific infection with an attenuated strain—**does occur** and **that** much more frequently than is usually supposed; and certainly more frequently than classical cases of the fulminant type.

Treatment with peroxide of hydrogen is thoroughly rational and in practice proves to be quite satisfactory. We are dealing with an anaerobic organism to which oxygen is lethal. One man told me recently that he was getting best results by irrigating every ten minutes day and night with no let-up until healing was complete. Others use continuous irrigation, and still others content themselves with thorough irrigation several times daily.

It occurs to me that a malignant edema of the fulminant type—if recognized early enough to successfully reach by amputation, would stand an equally good chance of escape—perhaps better by this manner of treatment.

### Summary:

Fulminant malignant edema is rare and fatal.

Attenuated malignant edema is much more common. Is recognized clinically, the mortality is not immediately high, and treatment is successful and satisfactory without resort to extremely radical measures.

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UNIVERSITY HOSPITAL CLINICAL  
SOCIETY MEETING—Jan. 19, 1923

### SPASTIC AND FLACCID PARALYSIS

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S. R. CUNNINGHAM, M. D., F. A. C. S.  
Oklahoma City, Oklahoma

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It is my pleasure this evening to present a case of cerebral spastic palsy for which we have begun treatment by multiple intraperineural neurotomy. Like many other diseases cerebral spastic palsy is known by a number of names. It is commonly called infantile spastic paralysis, spastic paraplegia, spastic hemiplegia and Little's disease. The condition was supposed first to have been recognized by Mr. Audry in 1741, but first described before a scientific body by Dr. Little in 1862. Cerebral spastic palsy is characterized by more or less mental deficiency accompanied by spasticity of groups of the skeletal muscles due to damage or disease of the supra-segmental neuron. The most common etiological factor is believed to be hemorrhage (at time of birth) along superior longitudinal sinus. The hemorrhage may be sub-dural or intermeningeal. It may be quite general or limited to a part or all of one hemisphere. The extent of the disease is dependent upon the extent of oedema and degeneration of cells in the cortex. Spastic paresis cases are reported to have followed acute anthrax occurring in the first few weeks of life. Only a few weeks ago Dr. Young and I examined a boy three years old whose mentality was extremely low. His extremities were spastic and his neck was flaccid. He could not talk, yet seemed to understand perfectly well. We made a diagnosis of congenital cerebral spastic palsy though his mother thinks the condition followed an illness that was diagnosed as diphtheria when he was five days old. She says, however, the only symptom she remembers was a swollen tongue. Recently we had a similar case in this clinic, four years of age, in which there was extreme adduction of his thighs and extreme flexion of the legs on the thighs and an accompanying dislocation

of the hips. The disease then may be hemiplegic, paraplegic, or diplegic in distribution.

The lowest intelligence is found in the diplegic cases. In some cases the mentality may be only noticeably weak, while in others there is idiocy. In many of these cases the physical disability is greater than the mental handicap. Whitman thinks 50 per cent of the hemiplegic type are feeble-minded and 13 per cent idiotic. In the paraplegic and diplegic type about 70 per cent feeble-minded and 40 to 50 per cent idiotic.

In cerebral spastic palsy the reflexes are increased and the extremities spastic, there is no atrophy and electrical reactions are not changed. Attempt at extension of any of the spastic flexions causes pain and increases the general spastic condition.

In anterior poliomyelitis the disease is of spinal origin and we have flaccid paralysis with lost reflexes. The muscles do not contract under electric stimulation and muscular atrophy soon appears. Operative treatment is justifiable only in cases having sufficient intelligence to be taught to use crutches or braces or to feed themselves and to play with other children. It is well worth while to transform a bed patient to one able to play in the sand. It is not possible to re-establish the lost muscular balance because of destroyed cortical inhibitory control, therefore, it is only left for us to correct the concomitant contractures and deformities by some other sort of surgical procedure.

Tenotomising certain tendons or groups of tendons has failed. Tendon and muscle transplanting has not been a success and splinting and braces are intolerable. Arthrodesing certain joints and intra-perineural neurotomy has given best results. In 1909 Adolph Stoffel first described the operation in which he sectioned the peripheral nerve trunks prior to their innervation of certain muscles. It is the predominance of the flexor groups over the extensors, rather than the true fibrous contractions and structural shortening that comes in neglected infantile paralysis that causes the deformities.

Hatt, Gallie, Nutt, and others have recently made reports of their use of the Stoffel operation. Before describing the operation of Stoffel let us recall that each muscle is an aggregation of fibers, fibers fine or coarse, corresponding to size and function of the muscles, and each **muscle** or **fiber** receives a nerve process corresponding in coarseness or fineness to its recipient.

Again then let us recall that each nerve trunk is a cable with an arrangement of funiculi in the cable that is not variable. Indeed it has been shown that the distribution of the funiculi of peripheral nerves to various muscles are less variable than is the arterial pattern to a given extremity. Working then with this anatomic basis, the Stoffel operation has been perfected. The nerve to be operated is exposed and after carefully slitting the nerve sheath the funiculi are segregated and tested out with fine needle and very weak electric current.

Portions of the nerve are sectioned in direct proportion to size of muscle or muscles innervated.

Every case is a law unto itself. The operator's action must be based upon his knowledge of his work and the case on which he is operating. In the cases I have operated are included operations on the obturators, the sciatic, the popliteals, the median, and the anterior interosseous. The improvement is not limited to the spastic extremities supplied by nerves operated.

The case of this boy R. H. six years old demonstrates nicely the claims for intra-perineural neurotomy. Admitted to the Hospital 10-27-22. Family history negative. Was noticed to be paralyzed before he was twenty-four hours old. Is fairly well developed and weight and height is about the average. Mental development quite a little below normal. Has never stood or walked. Left hand useless on account of complete flexion at wrist. Spasticity less marked in right wrist. Left thigh adducted and left leg flexed on thigh. Left foot in complete plantar flexion and adducted. Right leg flexed on thigh and foot moderately plantar flexed and adducted. On 1-5-23 we operated upon the sciatic on both sides and one the left median nerve. Ten days later without anaesthetic we applied plaster bandage to left forearm and hand and to both lower extremities with all joints in comfortable extension. He now is perfectly comfortable in casts when before or at time of operation such dressings would have been intolerable. This boy has been a bed patient all his life and absolutely no effort made toward his education or even for his amusement. Within 18 months he should be going comfortably about on crutches and aside from getting much more out of life for himself he will demand far less attention and care from his attendants. (Dr. Cunningham showed several cases illustrating end results after correction of severe structural shortening of tendons in anterior poliomyelitis.)

**Discussion:** Dr. A. D. Young.

Dr. Cunningham has asked me to speak of the difference between flaccid and spastic paralysis and in doing so will have to deal of course, with elementary facts. The reason there is spasticity of muscles in upper motor neuron districts is due to the fact that the inhibitory fibers move in the same tracts, i. e., direct and crossed pyramidal. The ordinary angle worm has no brain, being all spinal cord hence has no inhibition to control the lower motor neuron. So he is forever wriggling, constantly in motion from every touch of the earth or breath of air. Had we only the lower motor neuron, we, too, would be constantly in motion. The lower motor neuron, reaching from a certain level of the cord, controls the nutrition of the muscles supplied; as, for instance, the anterior horn cells in the lumbar region are the center for nutrition of the muscles of the legs so when these muscles are paralyzed from cord disease (infantile paralysis) they atrophy and undergo fibroid changes while in upper motor neuron paralysis the center for nutrition is undisturbed and the only atrophy occurring is that from disease.

Dr. LeRoy Long: These patients present a very interesting and important feature of the work being done in this Hospital. It is well known that our clinic is a clearing house for many unpromising conditions in the case of patients sent to us from all parts of the State, and there are certainly but few more unpromising than these unfortunate children who come with spastic paralysis and deformities as the result of birth injury. In the case of most of them there is poor mentality to the extent that the patient is not able to co-operate in any manner whatsoever.

The procedure carried out by Dr. Cunningham in these patients should receive serious consideration. It is a rational procedure through which it is possible to benefit the patient without at the same time taking the risk of having perfectly useless extremities when tenotomies are done.

More radical procedures, such as section of the posterior nerve roots after the method of Forester, or operation on the brain as advised by Sharpe, do not seem to be generally applicable. These are much more dangerous procedures, while it would seem that the results are, in the majority of cases, indifferent.

I am peculiarly interested in the case of the boy who was utterly helpless as the result of neglected sequelae of anterior

poliomyelitis. This is the type of case in which proper operative procedures followed by proper apparatus works wonders. This is a bright boy. There is nothing at all wrong with his mind, yet, before he was cared for properly he was denied the ability to move about save as he crawled. He was literally on the ground. Now you see him standing erect. He can look his fellows in the face with hope and with a consciousness that he is able to develop in many respects like other boys. I believe that it is not too much to say that it is probable that this service to him will change his life from a situation with nothing but sombre surroundings to a situation in which he will not only be happier, but will be able to take care of himself, and to even render some share of service to his day and generation.

I wish to express the appreciation of the School of Medicine for the useful work which is being done in our department for crippled children.

Dr. Wm. Taylor:

Case No. 19560. A Case of Fibrous Tuberculous Peritonitis.

Viola Trembley. Age 10 years. Female. White.

Admitted to Pediatric Section, Dec. 28, 1922.

Working Diagnosis:

Enteritis or Tuberculous Peritonitis.

Chief Complaints:

- (1) Epigastric Pain.
- (2) Distention.
- (3) Pain over right lower quadrant.
- (4) Loss of weight.
- (5) Temperature.

Past History: Negative.

Present History:

Illness began two months ago when she became ill short time after a hearty dinner. Complained of pain in the epigastric region, nausea, vomiting, followed by pain in right lower quadrant as described by patient. History to the effect that at this time a mass was felt in the right lower quadrant. Except for contact with tubercular aunt earlier in life physical examination showed fairly well nourished girl of ten years of age, color good, who has lost ten pounds during past month.

Physical examination:

Shows a soft enlarged abdomen, not painful on pressure, no masses felt, no fluctuation. Tympanitic, to which evidently the

distention is due. Other physical examination negative except for slight interscapular dullness.

Has been kept in bed in hospital and has lost some weight. Is constipated, and complains of repeated attacks of acute abdominal pains, for relief of which high enemas are necessary. These attacks seem to bear no relation to time of meal. The temperature range has been a uniform one as the chart shows, reaching 99 to 100 each day. Surgical consultation was asked at this time.

Jan. 5, 1923. (1) Dr. Long suggesting examination of stools for parasites.

(2) Red count.

(3) Gas—X-ray series.

(4) Fluoroscopic examination by rectal injection. (See charts).

Examination of urine shows one report of many white blood cells, but no clumping.

The blood examination shows:

12-29-22.

W. B. C. 9,100.

Neutrophile 61.

Large lymphs 15.

Small lymphs 24.

1-26-23.

W. B. C. 7,400.

R. B. C. 4,400,000.

Poly. 64.

Large lymphs 7.

Small lymphs, 19.

The X-ray Laboratory report as shown in the accompanying pictures:

(1) No pathology of the gastro-intestinal tract.

(2) Picture of chest is strongly positive of previous tuberculous infection.

Diagnosis of fibrous tuberculous peritonitis, based on:

(1) History of exposure.

(2) Symptoms—pain; nausea; loss of weight; temperature.

(3) Physical findings: distention, tympanitic in character. Abdomen: no evidence of fluid, the pain and distention prob-

ably due to abdominal bands.

(4) Positive von Pirquet.

Treatment:

Treatment recommended and now being carried out is:

(A) Absolute rest in bed in recumbent position.

(B) Daily exposure of abdomen to direct rays of sun.

(C) Nutritious diet.

Drs. Heatley and Taylor: (Demonstrating series of X-ray plates of different stages of case of central pneumonia in a child): Film made 11-29-22 shows typical picture of early central pneumonia. There is a rather dense homogeneous shadow not extending to the periphery. This shadow is over the central portion of the upper lobe and shades off into the hilus. Physical findings this date: Impaired percussion note with depressed breath sounds and bronchial voice sounds. Pulse of good quality. Evidently this is a case of apical lobar pneumonia, beginning in the central portion of the lobe and now approaching the periphery. There are very few rales heard.

FILM made 12-7-22 shows extension and increase of density of the shadow. The shadow now extends nearly to the periphery. Physical findings: Temperature still up but not as high as previously. The entire lobe is involved. No involvement of the left side can be made out.

FILM made 12-10-22 shows a very dense shadow extending over the entire right chest. This is due to a thickening of the pleura and an accumulation of fluid in the pleural cavity. There is an entire obliteration of the lung markings. Physical findings: Breath sounds more distinct than ever before. Our physical findings have justified the diagnosis of fluid, but now believe that the fluid is changing in character and will be purulent. There is increased temperature. Left side of chest does not seem to be involved.

FILM made 1-20-23 after drainage shows some infiltration of lung. Physical Findings: Empyema condition improving.

# THE JOURNAL

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### EDITORIAL

#### CANCER

It is not likely that a single cause or a single cure will ever be discovered for such a variety of disease as cancer presents, in its different manifestations but constant research work no doubt carry us nearer the goal, day by day.

Cancer now causes 90,000 deaths every year in the United States, being chiefly a disease of adult life but youth is by no means exempt.

In this country cancer kills one woman in eight, and one man in thirteen after forty years of age: Between the ages of 35 and 45 three times as many women, as men

die of it. This difference in mortality being, no doubt, due to the prevalence of cancer of the generative organs in women. What an appalling fact, due to the negligence of the physician in not making an early diagnosis, for it is an established fact that in its incipency it is a local disease, and is curable by competent treatment at this stage.

While we do not know the ultimate cause of cancer, which starts the malignant growth of the cells, we do know about the condition under which the growth begins. We are fairly certain that chronic irritation is a pronounced factor in its taking on a malignant degeneration. Hence, when we have an ulcerated condition which shows no tendency to heal we should be on our guard at once and suspect a beginning malignancy.

One point to be remembered is, that the line of demarkation between a benign condition and a malignant one is not easily determined: A condition may be benign today and within a few hours or days may have taken on a malignancy. For this reason we should be slow to pronounce any tumor a benign growth without due consideration and very careful examination, having a microscopical examination made at the earliest possible time. That is the only way you can be sure to save your patient, and your reputation.

Cancer once established soon invades the lymphatics and once it has done so, the cure is very problematical, to say the least. Our only salvation is an early diagnosis, and this means in many cases an early microscopical examination, for once the disease becomes macroscopic, any form of treatment is contingent on the fact, that the lymphatics are not too distally involved.

We must endeavor to teach our patients that all forms of manipulation and massage are very conducive to an extension of the disease, or a production of malignancy in a benign growth, hence osteopathy has no place in the treatment of tumors, of whatsoever character. Nothing can be more conducive to the dissemination of cancer cells into the adjacent lymph channels, than is the bruising of the tissues. The use of caustic applications should be avoided, since instead of being curative they are one of the greatest provocative measures in the production of malignancy in an otherwise benign growth.

All women who have borne children should be warned by their physician of cervical cancer, especially at the climacteric and he should, if at all possible, compel an

examination of the organ at this time. It is hardly necessary to state what the danger signals are in the incipency of cervical cancer. Every textbook is full of the early premonitory signs and they should be remembered by any one who gives any thought to his profession. Don't tell a woman who is having excessive bleeding around the climacteric that such a thing is normal, for nine times out of ten it is already a well advanced case of cancer.

Breast tumors should all be viewed, in the light of a possible malignancy, and early removal and section should be done, for while the condition is limited to the breast, it is easily and surely curable, but once it invades the axillary lymphatics the chance for metastasis is very greatly increased and the chance for cure has been reduced to almost nothing. The percentage of malignant tumors of the breast has been shown to be decreasing in the light of present day experience, but that does not relieve us of the responsibility of proving our condition to be a benign one, or of making a definite diagnosis which can be done. We should impress upon our patients that cancer is not a "blood disease" but always a local condition when it begins and that early treatment will cure it. That in its early stages it causes no pain or symptom of ill health, and that point should be impressed, because a sore or tumor gives no pain, the patient draws the conclusion that it is something of no import, when exactly the opposite is true. Cancer gives no pain until the condition has invaded the tissues to such an extent that the pressure is the agent of the reproduction of the pain.

No really competent physician will treat a condition that might mean cancer without the most painstaking examination, for its early treatment is as necessary as is that of an acute appendicitis.

We must educate the public to accept its share of the responsibility for the greater mortality from cancer, by bringing before it its curability by early treatment, and by this I mean early scientific treatment, for until the public understands that cancer deaths will still go marching on.

"TRUTH, THE WHOLE TRUTH;  
NOTHING BUT THE TRUTH"

The results of past years of multiplied activities in the domain of malignant disease has served to bring the subject of cancer prominently before the mind of the public, and to promote a nation wide interest in the discovery and treatment of many early

cases. The public is immensely interested in the subject and is now demanding to know the facts in the matter of cancer.

During the first Cancer Week under the direction of the Society for the Prevention and Cure of Cancer, short talks were made by physicians to more than two million people. These talks were made before the various health organizations, civic and social clubs, and even from the pulpit during Sunday Service.

About thirteen years ago the first concerted drive against the "Great White Plague" was begun by the American Tuberculosis Association. Since that time there has been a steady decrease in the number of deaths from tuberculosis; also the number of cases being reported is decreasing to such an extent that fair promise is given of almost complete eradication of the disease. The same may become true, though in a diminished degree, of cancer.

The public should be taught that cancer is not a communicable nor a contagious disease, but that each and every wart or mole about the face; every fissure of the lip; every lump in the female breast at any age; all tears or lacerations of the birth canal are potential cancers and prevention lies in early removal or repair. The public should be taught cancer is curable only in its early stage, and that cure is by means of surgery or one of its allied agencies, Radium or X-Ray therapy. The many spurious cancer cures should be avoided and unscrupulous practices of cancer specialists condemned.

In all too many cases the physician is at fault in not bringing his cases to early treatment. It is estimated that from three to five months is the average time between first examination and beginning of proper treatment. A time sufficient in many cases for the disease to pass from a local to a systemic one. If in such cases the attending physician is at fault no word of condemnation is too severe.

Greater zeal is needed on the part of physicians and the public in getting hold of these cases early and instituting proper treatment.

CANCER IS NOT AN INFECTIOUS DISEASE.

CANCER IS NOT A TRANSMISSIBLE DISEASE.

CANCER IS NOT AN HEREDITARY DISEASE.

BUT

CANCER IS A PREVENTABLE DISEASE.

CANCER IS A CURABLE DISEASE.  
EARLY DISCOVERY AND TREATMENT THE MEANS.

## OUR NEW DEPARTMENTS

Once more, after much irritation, and apparent failure, your JOURNAL proposes to undertake some sort of organization of its reading matter into some sort of system, which we hope may prove of value to our readers. These departments will be devoted to the Eye, Ear, Nose and Throat; Orthopaedic Surgery; General Surgery, etc., and, finally, we shall not neglect current topics of the day. This latter we hope to accomplish by clipping widely from various current publications, matter exactly as it appears in their columns. To be sure we understand at the beginning that our selections as editorial aides may not fully meet with the approval of all our members, but that is manifestly an impossible assignment to place upon any man or number of men: there would always be some disagreement. However, we have attempted to do the best we can and hope for the cooperation of the mass of our readers. The reader and member of our organization is also cordially invited to offer his views in these columns, provided, they are not too long. Brevity is the soul of wit. Sometimes we are not too brief. Short, terse clippings from other publications, lay or medical will be welcomed.

*Editorial Notes—Personal and General*

Dr. J. R. Allen, Caddo, has moved to Healdton.

Dr. and Mrs. W. H. Horine, Henryetta, are visiting in Illinois.

Dr. B. M. Ballenger, Strong City, has been appointed health officer for Roger Mills County.

Dr. J. B. Beckett, Spiro, has been appointed health officer of LeFlore County.

Dr. and Mrs. Walter Hardy, Ardmore, attended the Tulsa convention via aeroplane.

Dr. Allan Lowry, Blackwell, "took in" the Frisco Surgical meeting, Kansas City, in May.

Dr. L. T. Gooch, Lawton, attended the meeting of Frisco Surgeons at Kansas City in May.

Dr. W. B. Newell, Enid, has been appointed superintendent of health of Garfield county.

Dr. Wm. M. Cott, Okmulgee, has been appointed City Superintendent of Health of that city.

Dr. and Mrs. C. F. Loy, Wilburton, recently entertained forty members of the local Rook Club.

Dr. and Mrs. L. D. Hudson, Bartlesville, are making an extended trip to southern and eastern points.

Dr. and Mrs. A. M. Sherburne, Cordell, have gone to Eugene City, Oregon, where they expect to remain all summer.

Dr. G. H. Wetzel, Sapulpa, "took the count" recently, when a carbuncle invaded his muscular and vascular systems.

Dr. D. M. Lawson, Nowata, has been appointed surgical examiner for the Citizens Military Training Camp at Ft. Sill.

Dr. W. E. Dicken and family, Oklahoma City, will spend the remainder of the summer months in southern California places.

Dr. R. E. Darnell, Clinton, was elected President of the Oklahoma Health Officers Association, convening at Norman early in June.

Dr. and Mrs. T. S. Love, Oklahoma City, are attending the meeting of the A. M. A. at San Francisco and will visit other western points.

Pittsburg County Medical Society has organized a Physicians exchange for the purpose of facilitating the calls and service of members of the society.

Dr. C. S. Summers, has been appointed Designated Examiner for the Veterans Bureau for Tulsa following the recent discontinuance of the local office of the Bureau at that place.

Tulsa County Society entertained with a dance at the Elks Club Thursday, June 21, in honor of the ladies and in appreciation of their cooperation and labors extended during the Annual Meeting in May.

Discrepancy in Serum charges between Oklahoma and other states, according to a resolution of the Tulsa Meeting, have been placed in the hands of Governor Walton, by the Secretary-Editor, Dr. C. A. Thompson, Muskogee.

Drs. J. M. Byrum, Shawnee, W. Albert Cook, Tulsa, and C. A. Thompson, Muskogee, are attending the San Francisco A. M. A. Meeting, where the two former will be delegates while Dr. Thompson will look after business and other interests of the State Medical Association.

Craig County Medical Society met at Vinita June 6, with the following announced program: "Some Phases of our New Medical Law," Dr. J. M. Byrum, Shawnee; "Prostatic Enlargements," Dr. Julius Frischer, Kansas City. A banquet was served after the scientific program.

Dr. S. N. Mayberry, Enid, is undertaking to give a part of two days weekly for the purpose of free operations upon children suffering from adenoids and infected tonsils, who are unable to pay for such services. This should be done in every community, but restricted absolutely to those who are unable to pay.

Dr. G. E. Hartshorne, Tulsa County Superintendent of Health is taking his new job seriously. Not content with mauling the Christian Scientists he recently issued strict orders to proprietors and managers of Tulsa swimming pools that the sick and infected, so far as detectable, should be kept out of the pools.

The Shepard-Towner Maternity Act will remain, for the time at least, upon the statutes of the United States. June 4th, the United States Supreme Court refused to open the matter in the form presented to the court. The court stated that it was without jurisdiction and refused to pass upon the validity of the law.

Dr. A. E. Davenport, Commissioner of Health, is insisting that no burials shall occur in Oklahoma without the cause of death being ascertained prior to burial. This is as it should be, and all should cooperate in that work. Recently, in Muskogee, when some physicians were about to perform a postmortem, they discovered that some "brainy" undertaker had already embalmed the subject, which, of course, would render the post-mortem report worthless in most cases.

Oklahoma City Chamber of Commerce will extend an invitation to the House of Delegates to have that body select that city as its meeting place for 1924. Well, admit the city would be the smallest from the population standpoint ever undertaking such an affair for that body, nevertheless, they have the organized ability and finest of clinical workers. They would not make a bad showing at all when their small population is considered. We are sure the visitors would go away most agreeably surprised.

Dr. M. K. Thompson, Muskogee, is "getting m's'n" just now. As President of the Muskogee School Board, the Daily Phoenix of that city charges that he is responsible for "secret" meetings of the board from which press representatives are excluded. The subject is also one of agitation by reason of the fact that the principle of excluding married teachers from the lists is being slowly executed. Naturally also there is a tinge of the religious and sects questions creeping in. That is invariable in every such controversy, whether there is just basis for it or not.

Dr. C. M. Vaughan, Tulsa, who sought to prevent the Tulsa Society from giving Tulsa hospitals a list of their "members in good standing," lost his suit, the trial judge also advising him that if he rebrought it he would have to get service upon each member (quite a nifty little job that judge laid out). At this juncture the attorneys for the society advised that it was "no use," that the thing he sought to prevent had already been done, and before he started his original preventative measures. That ends the matter and we shall hear no more from that source of irritation.

"One Dollar" was the munificent sum received by O. B. Montgomery, who sued Dr. C. W. Hooper of Pawhuska for injuries which, Montgomery thought, knew and swore were worth at least \$25,000.00. Quite a difference of opinion between the doctor and his erstwhile patient. Also it was quite a serious reflection on the good judgment of the jury. If Montgomery was entitled to one dollar, he was certainly entitled to more, but the jury, "straddling" as it often does, rendered

such a judgment in order to evince its sympathy for the plaintiff whom they knew to be entitled to nothing, yet they did not wish him to pay the costs, so they conveniently saddled them upon the helpless doctor.

Dr. D. W. Griffin, Norman, Superintendent of the Norman State Hospital, at Tulsa, called attention to the vast improvement in personnel and management of nervous and mental disease institutions. Dr. Griffin especially stressed the fact that such diseases were not necessarily increasing, but that on the contrary, the improved methods were making rapid inroads towards a decrease in them. He noted, with satisfaction, the fact that padded cells were virtually a thing of the past, that cruelty and brutality in handling inmates was not tolerated any longer and that the surest way an attendant had of finding himself seeking a new field was to be caught maltreating patients in any manner. Moderate exercise and very mild forms of work were the greatest remedies in his opinion.

Dr. G. E. Hartshorne, Superintendent of Health, Tulsa, is opposing the appointment of Christian Scientists as teachers in the Public Schools, on the ground, it is said that possibly "heresy" might be handed the children. This is true, and more. If a teacher refuses to see, refuses to acknowledge that an appreciable "rash" over the face and chest of a child, accompanied by a sore throat, that a cough, obvious to the entire assemblage, often with a fever, has not most dangerous potentialities, that they are often harbingers of destruction, then that teacher certainly has no right to be given the grave responsibility of watching over the best interests of a room full of helpless children. Yet, just at that exact point does the entire Christian Science scheme fall down and become, not only a menace to the sick individual, trustingly following fool, or no advice, but the Science becomes a menace to the entire community.

Morningside Hospital, Tulsa, has become a standard hospital by complying with the requirements of the Standardization as prescribed by the American College of Surgeons. The hospital comes in under the minimum standard for 50 bed hospitals. This is the first hospital in Eastern Oklahoma to take this step and speaks well for the profession of Tulsa, since it will lead to a more thorough examination of patients, and a more careful study of the case before operative interference is undertaken. This is really the first real forward step to be taken by the profession of Tulsa. A Staff has been appointed consisting of the better known men in the profession in Tulsa, with an Executive Committee consisting of Drs. A. W. Roth, W. Albert Cook, Ralph V. Smith, G. A. Wall and A. W. Pigford as secretary-treasurer. The hospital will still remain an open hospital with the Executive Committee as referee as to the qualifications of the visiting men.

The New Orleans Picayune quoting the Journal, A. M. A., recently called attention to the shortage in efficient negro physicians throughout the Southland. As a remedy the Picayune suggests increased medical college facilities as well as scholarships for the more intelligent of the race. This should be, for no one thing so vitally affects the health and hygienic surroundings of the White race as does that condition of the Black. Every nurse maid, waiter, cook and house aide comes directly into contact with the whites and naturally

spread infection to them. For selfish and mercenary reasons alone, leaving the humanitarian entirely out of consideration, something should be done to better the situation. It occurs to the writer that here is a fine field for the Rockefeller Foundation, certainly as deserving as the Chinese, upon whom, at present, enormous sums are being expended. However, the ratio of blacks to whites in the South is rapidly decreasing, Negroes by the thousands are moving northward annually to the place where they at least think they will get better treatment, but that is doubtful, for when the clash of industrial strife confronts them great wrongs are going to be committed against the negro, just as they are and have been committed by masked murderers in the South. It is estimated in the decade 1890-1900, that more than 360,000 negroes moved North. An official of the Illinois Central estimated that recently they were leaving Memphis at the rate of two hundred nightly. This all comes about from inexcusable sabotage and mob rule. Perhaps, when the horse is gone they will awake to lock the barn door.

The McAlester Penitentiary and the physician of that institution, are the latest to come into the limelight of "charges" which, just at this time, seem to be rather prolific, perhaps due to the warm "growing" weather we are having. It is never to be forgotten that a great many of such charges as are made by inmates of these institutions are made by liars of the "first cloth", and therefore to be carefully received, with a mind full of openness and conviction as to the possibilities that white is not black or vice versa. They are often made by most fluent liars, men utterly without character and without regard of the possible damage they may do a good man. On the contrary, our penal and similar institutions cannot be too closely guarded against possible abuses directed at the helpless inmate. That some mistreatment does occur goes without saying. The fact of the matter is that the medical staff at the penitentiary is wholly inadequate, as it is in all our state institutions. One phase of the matter, possibly overlooked in the hurry, is that the present incumbent, Dr. Echols, is not a general practitioner and surgeon, but a specialist in eye, ear, nose and throat work. It is well known that men in that or any other specialty become wrapped up in a narrow phase of work, they most naturally disregard the signs, very clear to the average man, but obscure to the specialist, simply because they are forgotten. For instance, it is questionable, if an eye, ear, nose and throat man has the necessary poise to make him scent out in advance an avalanche of human destruction in the form of an impending rupture of the appendix, gall-bladder, tubes, etc. For this reason, and there is no other charge possibly chargeable to the present conduct of affairs, the staff at the penitentiary should be extended to include men covering the various specialties, at least general medicine and general surgery with a large accent on the diagnostic ability of staff should be kept in mind as the proper due of our wards at McAlester.

### DOCTOR MAHLON A. KELSO

Mahlon A. Kelso, born at Circleville, Ohio, in 1857, graduate of the Medical Department of the University of Nebraska, in 1887, died June 13, 1923 at Enid, Oklahoma, of myocarditis and nephritis, aged 66 years. He suffered a right hemiplegia at Brownsville, Texas, last February, where he had gone to spend the winter, and had been helpless and unable to speak since that time.

He came to Oklahoma in 1892 and made the run into the Cherokee Strip in 1893, settling at Enid at the time the city was founded, and practising there until the time of his last illness. He was one of the founders of the Garfield County Medical Society and of the Central Oklahoma Medical Society. He was prominent in the councils of the State Medical Association; was once its Vice-President, and a delegate to the annual meeting of the A. M. A. He was city physician of Enid for many years and was widely known and respected by the profession of the state and by the people of Enid.

Dr. Kelso took a prominent part in Democratic state politics for some time, and at one time edited a Democratic newspaper at Enid. His wife died in January, 1922, being survived only by her husband, they having no children. He was prominent in Masonic circles, holding membership in all of the Masonic bodies in Enid.

The funeral was held under the auspices of the local Blue Lodge, June 17th, the interment being in Enid Cemetery. The profession of Enid and of Garfield County mourns and honorable and respected physician and friend.

### BOOK REVIEWS

**NURSERY GUIDE FOR MOTHERS AND NURSES**, By Louis W. Sauer, M. A., M. D. Senior Attending Pediatrician, Evanston Hospital. Formerly Attending Physician Chicago Infant Welfare and Assistant Attending Physician Childrens Memorial Hospital, Chicago. Cloth. Price \$1.75, 188 pp., with 12 illustrations. St. Louis The C. V. Mosby Company, 1923.

A well arranged volume, giving in detail very useful information for the Nurse and Mother as to the prenatal and early childhood care necessary to the welfare of infants also giving many essential warnings.

**LEGAL MEDICINE and TOXICOLOGY**. By many specialists. Edited by Frederick Peterson, M. D., Manager Craig Colony for Epileptics; Walter S. Haines, M. D., late Professor of Chemistry, Materia Medica and Toxicology, Rush Medical College; and Ralph W. Webster, M. D., Assistant Professor of Medical Jurisprudence, Rush Medical

College. Second Edition. Two Octavo volumes, totalling 2268 pages, with 334 illustrations, including 10 insets in colors. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$20.00 net.

This splendid work, by reason of its wide range, comes to us in two splendidly illustrated volumes. Volume one has chapters devoted to Legal Rights and Obligations of Physicians; Identification of the Living; Identity; The Signs of Death; Sudden Death; Death from Cold, Heat and Starvation; Death and Injuries by Lightning and Electricity; Wounds; Gunshot Wounds; Burns and Scalds; Railway Injuries; Injuries and Disorders of the Nervous System Following Railway and Allied Accidents; Speech Disorders; Inebriety; Stigmata of Oeeneration; Mental Disorders in Medico-legal Relations; Malingering and Feigned Disorders; Summaries of Laws; Legitimacy—the Determination of Sex—Signs of Delivery; Abortion and Infanticide; Impotence and Sterility; Rape; Unnatural Sexual Offenses; Marriage and Divorce; Medico-legal Relation of Venereal and Genito-Urinary Disorders; Medical Jurisprudence of Life and Accident Insurance. The above is not the entire contents. Some matter deleted here on account of lack of space.

**VOLUME TWO:** Contains General Principles of Toxicology; Forensic Questions Relative to Poisoning; Postmortem Technique; Inorganic, Gaseous, Alkaloidal, Non-Alkaloidal, Vegetable, Protein, Fire and Chemical; Glass and Mechanical Irritant, and other poisons. Postmortem imbibition of Poisons; Medico-legal Examination of Blood; Blood-Stains, Seminal Stains and Hairs; Relation of X-Rays, Radium and Ultra-Violet Rays, ending with a chapter on "The Common Law and Statutory Obligations of Pharmacists."

A glance at the above subjects will indicate that the work is of very wide range. Inspection and reading of the books will bear out the decision.

**COLLECTED PAPERS, WASHINGTON UNIVERSITY,** School of Medicine, Volume One, 1921. Edited by the Committee on Publication, Medical School, Drs. Evans A. Graham, Sidney I. Schwab, and Robert J. Terry, Chairman, St. Louis. Cloth, 1079 pages, 347 illustrations, some in colored plates. Price \$12.00. The C. V. Mosby Company, St. Louis.

It is only to note among the contributors the names of Drs. George Dock, Ellsworth Smith, John S. Kimbrough, M. F. Ingram, M. B. Clopton, Ernest Sachs, V. P. Blair, Greenfield Sluder, John R. Caulk and many others of equal ability to have one understand the import of this issue. The work covers the wide field of cases noted in a large General Hospital, is finely illustrated and lacks nothing to make it a worthy contribution to medicine.

**INFLAMMATION IN BONES AND JOINTS** by Leonard W. Ely, Associate Professor of Surgery, Stanford University, Cloth, 144 illustrations, 433 pages. Price \$6.00. J. B. Lippincott Company, Philadelphia.

When one is considering disease of the bones and joints, modern contributions are not completed until the last word from Dr. Ely has been heard. In his latest work he gives us the last word, the accepted technique, the diagnosis and treatment of these infections and abnormalities. There are some beautiful cuts in color which add to the value of the book.

**CLINICS AND COLLECTED PAPERS, ST. ELIZABETH'S HOSPITAL,** Richmond, Va. Contributed by the Staff, Drs. J. Shelton Horsley, Warren T. Vaughan, Fred M. Hodges and others. Cloth, 560 pages, illustrated. Price \$7.50. C. V. Mosby Company, St. Louis.

**THE SURGICAL CLINICS OF NORTH AMERICA.** The New York Number, April 1923. The Surgical Clinics of North America (issued serially, one number every other month). Volume III, Number 2, (New York Number, April 1923). 286 pages with 159 illustrations. Per Clinic year (February 1923 to December 1923). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London; W. B. Saunders Company.

**PREVENTIVE MEDICINE.** An introduction to The Practice of Preventive Medicine by J. G. Fitzgerald, M. D., F. R. S. C., Professor of Hygiene and Preventive Medicine and Director Connaught Antitoxin Laboratories, University of Toronto; Assisted by Peter Gillepie, M. Sc., C. E. M. E. I. C., Professor of Applied Mechanics, University of Toronto; and H. M. Lancaster, B. A. Sc., Director of Division of Laboratories, Provincial Board of Health, and Demonstrator in Sanitary Chemistry, Department of Hygiene and Preventive Medicine, University of Toronto, and Chapters by Andrew Hunter, M. A., M. B., F. R. C. S., J. G. Cunningham, B. A., D. P. H., and R. M. Hutton, with appendix articles by various contributors. Cloth, illustrated 868 pages. Price \$7.50. C. V. Mosby Company, St. Louis.

**THE HEART IN MODERN PRACTICE, DIAGNOSIS AND TREATMENT,** by William Duncan Reid, A. B., M. D., Chief of Heart Clinic at the Boston Dispensary, Junior Assistant Visiting Physician and Member of the Heart Service at the Boston City Hospital, Formerly Assistant Visiting Physician to Out-Patients at the Massachusetts General Hospital. Cloth 352 pages with 32 illustrations. Price \$5.00. J. B. Lippincott Company, Philadelphia.

This book incorporates the best of the new knowledge with that which may be said to have stood the test of time. Important of which, among others is noted:

The action of syphilis on the heart is described in a single chapter, instead of in one place for aortic insufficiency, in another for the myocardial changes, etc., thus bringing together all of the data pertaining to one subject in one place.

Gives the reasons, as far as is possible, for the signs and symptoms mentioned, making a special effort to be clear.

Functional ability of the heart is determined by the condition of the myocardiums, rather than by the valves, and its importance is emphasized.

Digitalis and the method of giving it in relation to the patient's body weight, etc., is fully detailed.

Quinidine Sulphate and its therapeutic use is fully described.

**CURRENT COMMENT**

By The Editor,  
Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, whatever or wherever it may be. Contributions are invited from our members

**MR. McDOODLINGS.**

(From the Worlds Work, June, 1923)

The Who, preeminently Who,  
Is William Gibbs, the McAdoo,  
(Whom I should like to hail, but daren't,  
As Royal Prince and Heir Apparent),  
A man of high intrinsic Worth,  
The Greatest Son-in-law on Earth—  
With all the burdens thence accruing,  
He's always up and McAdooing,  
From Sun to Star and Star to Sun,  
His work is never McAdone,  
He regulates our circumstances,  
Our Buildings, Industries, Finances,  
And Railways, while the wires buzz  
To tell us what he McAdoes,  
He gave us (Heaven bless the Giver)  
The tubes beneath the Hudson River,  
I don't believe he ever hid  
A single thing he McAdid,  
His name appears on Scrip and Tissue,  
On bonds of each succeeding issue,  
On coupons bright and posters rare,  
And every Pullman Bill of Fare.

**Postscript:**

But while with sympathetic croodlings,  
I sing his varied McAdoodlings,  
And write these eulogistic lines,  
That thankless McAdoo resigns.

**LAWLESSNESS MUST BE MET WITH LAW.**

Lawlessness must be met with law. If a crime is committed, it is our duty to bring the criminal to justice by due process of law. Any body or organization which takes the law into its hands, whether it be by lynching, by beating, or by running an individual out of a community, is equally criminal with the offender. The laws were placed on our statute books by our representatives in Congress assembled. If they are inadequate or unwise, the machinery is present whereby they may be changed. It is un-American to do anything but uphold them and abide by them.

We must check, and will check, any who infringe the laws duly adopted.

We hold the creed of equal opportunity for all. Lincoln rose through his individual worth from the humblest beginning to the highest honor in the nation. Destroy liberty and you have destroyed equal opportunity. Then there will be no more Lincolns in this country.

We must maintain our toleration, racially and religiously. Personal liberty is sacred to the country. If we would not forswear our country, we must preserve it. Unless we do all these things, unless we preserve not only in deed, but in thought, a recognition of others' rights, we had better burn the Gettysburg Address and sell the Statue of Liberty for scrap, for freedom and liberty will exist no longer in our land.—Lieut. Col. Theodore Roosevelt in *Public Affairs*, June, 1923.

**THE VIEWS OF "LABOR" AND MRS. PARK.**

And here are the views of LABOR:

Mrs. Maude Wood Park, the very able president of the League of Women Voters, says that the United States is ruled by a minority, and undertakes to prove it by submitting figures showing that a majority of the men and women eligible to vote refuse to go to the polls even in presidential contests.

According to Mrs. Park, in 1920 there were 54,421,832 men and women in the United States eligible to vote, and 26,705,346 voted, about 49 per cent of the possible whole.

In November last, 33 states elected governors. The total number of eligible voters in those states was 48,434,483, but only one in three took the trouble to go to the polls. The total vote cast was only 15,185,071, or 39 per cent of the possible vote.

"In primary elections and local elections the percentage is much lower," states Mrs. Park.

At the annual convention of the League of Women Voters held in Des Moines, Iowa, last week, Mrs. Park made a stirring appeal to the delegates to assist in remedying this situation. She urged that the women organize without regard to party affiliations to bring out a larger vote in 1924 and suggested that they might reasonably hope to induce 75 per cent of the voters to go to the polls.

This is a movement which should receive the earnest support of every lover of democracy. We cannot have a Government of the people while a majority of the citizens refuse to take the trouble to vote.—*Public Affairs*, June 1923.

**TOWN MEETING PLAN PRESENTS SOLUTION.**

The American people today could pursue no wiser course than to restore what in effect was the old town meeting custom of the New England people during every important election year. This would mean that old people and young would assemble with reasonable frequency, as each election approached, in every school house and public hall in America and have a full and free interchange of views and information relative to candidates and measures, to the end that each voter might become well equipped to cast an intelligent vote at the ballot box. The adoption of this practice would result in improving government in America and in increasing the benefits of government 200 per cent within a very few years.

Ignorance begets prejudice, and both always fall a prey to the demagogue, in free countries. The demagogue is more dangerous to free government than the I. W. W., or the bolshevist, or the anarchist. There is no such thing as clear thinking without a knowledge and intelligent understanding of our entire scheme of government, the true spirit of our institutions, and of the direct relationship of each to all the affairs of the citizenship, both individually and collectively. Incalculable material losses and irreparable injuries and setbacks to our entire social and moral affairs are the inevitable outcome of the citizen's neglect to perform his public duty.—Cordell Hull, Chairman Democratic National Committee, *Public Affairs*, 1923.

### JACK FREES WIFE SLAYER.

#### Osage County Convict Sentenced to Life Had Served But Two Years of Term

OKLAHOMA CITY, May 26.—W. R. Barnes, of Osage county, convicted in November, 1920, of the murder of his wife, and sentenced to life in the penitentiary, was paroled today by Governor Walton.

Charles Roff, Osage county attorney, said the crime was one of the most brutal in the history of the county. Barnes' wife had refused to live with him, and he shot her as she stepped from a motor car to enter a Pawhuska bank.

Barnes spent part of the two years of his life sentence he had had in confinement in the state insane asylum at Vinita but was sent to the penitentiary when he was declared sane.—Muskogee Phoenix.

### NEEDS A NEW PARDON

#### Oklahoma Prisoner Released Saturday Jailed in Kansas

PARSONS, Kan., May 28.—One day after he was paroled from the Oklahoma penitentiary, William Harris, 26 years old, was back in jail.

According to parole papers found on him he was paroled Saturday, came to Parsons that night and was arrested Sunday morning for stealing a watch from a guest at the Y. M. C. A. According to the parole papers he was sentenced for grand larceny.—Muskogee Phoenix.

In this connection we are presented to an amazingly inconsistent position adopted by a man who seems bent on carrying water on both shoulders, placating one interest one day, the next day diametrically opposed interests "theirs" to convince them he is with them soul and body. Such paroles or pardons (they amount to the same thing) as the above noted can only have one result—total disrespect for and breaking down of all law. Ordinarily, in many communities these men would have been promptly hanged, for they admitted they had cold-bloodedly murdered a man, whose only offense was that he worked. Now on the other hand, we find the Governor savagely and snarlingly reminding men that he has the "law" behind him, that if there is any disturbance of his favorites at Stillwater he will make them respect the law. Could anything more strikingly bear out the saying "Consistency, Thou art a jewel."

### THE JEWISH CONTROVERSY

#### TO THE EDITOR OF THE NATION:

Sir: Not all anthropologists agree with Roland B. Dixon. In a pamphlet entitled "Nationality and Race from an Anthropologist's Point of View," being a lecture delivered at Oxford University by Arthur Keith, M. D., LL.D., F. R. S., is this paragraph:

If we except the Lapps and other Mongolian elements in Russia, there is only one people in Europe with a legitimate claim to be regarded as racially different from the general population. That exception is the Jewish people. . . . The Jews maintain a racial frontier, such as dominant races surround themselves with: they carry themselves as if racially distinct. Their original stock was clearly Eastern in its derivation; the peoples

of Europe sprang from another racial source. . . . However much the Jewish racial frontier may be strengthened by the faith which is the standard of the race, raids have been made, are now made, across the frontier and a certain degree of hybridization has occurred. Even thus exposed in the eddying seas of modern civilization, the race spirit of the Jews has preserved the greater part of the original character carried into Europe by the pioneer Semitic bands. In 90 per cent of Jews the physical or Semitic characters are apparent to the eye even of the uninitiated Gentile. In the Jewish people we see nature steering one of her cargoes of differentiated humanity between the Scylla and Charybdis of the modern sea of industrial civilization.—San Francisco, February 24, Leo Newmark.

### TOO EARNEST

#### TO THE EDITOR OF THE NATION:

Sir: The cause of anti-Semitism lies in the earnestness and industry of the Jewish student. The Jewish student is not a loafer; he does not go to college for fun, for football, or for the purpose of belonging to clubs and being able to indulge in drinking and sexual orgies. He studies hard, he is intelligent, and therefore carries off most of the prizes. This naturally angers the Gentile student; by raising the general level of scholarship, the Jewish student forces the non-Jewish students to study harder and to indulge less in smoking, drinking, and athletics.—New York, February 24, William J. Robinson.

### ANTI-SEMITISM ANTEDATES CHRISTIANITY TO THE EDITOR OF THE NATION:

Sir: If the "roots of Anti-Semitism" were as simple as Mr. Kallen thinks, how easily might America deal with the problem! But let him read the passages which Reinbach has collected in his book on "Anti-Semitism in Classical Antiquity," or let him visit Jaffa or Biskra, and the problem will not seem as simple as a mere incident in the Christian drama of salvation. The high tragedy cannot be summed up in a single theorem of logic or a single dogma of theology.—Columbia, S. C., March 3, Overton Beach.—The Nation, New York.

### PRESS CRITICISES

The Arapahoe Bee last week printed an editorial purporting to reflect public opinion concerning the gubernatorial administration, and under the heading, "Walton the Autocrat", said:

Oklahoma no longer has a Democratic form of government. We abandoned that in the last election. We are getting what we voted for. Jack Walton was so transparent that any thinking man could see through him. He told the farmers how little they get for their labor. They agreed. He told labor how it is abused. Labor agreed. He said the schools should be taken out of politics, and the schools agreed. But no way of doing things was suggested by Jack. The voters decided that there was a great leader who could hocus-pocus things through. And then Jack promised to bring back Fred Dennis, Oklahoma wanted Fred Dennis brought back.

The people voted and Jack went in. He spent thousands of our dollars on a barbecue. People wondered if that was the way a man of the people ought to act. The legislature convened and Jack made them an economy speech, but asked for big money for his own use, and got it— and people wondered if that was the way a man of the people

ought to act. The legislature went hog wild,—so wild that Walton was in a hole and had to do something, so he trimmed appropriations for education. A demagogue does not want too much education. Jack did not trim appropriations for politicians. He let these stand. Then began the autocratic rule. The Constitution and the statutes were swept aside. They were in the way.

Where they said no man could hold office created by his aid the man was appointed anyway. While the law was plain that the regents and various boards should hold until their term expired, Jack hoisted them off the boards anyway. This was to give him control by controlling his appointees. People stood aghast. They saw the university rocked to its foundations. They saw normal schools which were doing fine, shaken up and turned upside down and the faculty jarred loose to make room for the Autocracy.

We hold our breath to see what Jack will do next. No need to wonder. He will do the thing which looks like it would help build up his machine. His appointees will not be thinking men but they will be tools. His lieutenants are not thinking men; they are tools who say "yea" when Jack says "yea", and "nay" when Jack says "nay". Custer county's representatives in the legislature did this very thing. Our senator voted yea because Jack said yea, and Jack rewarded him with appointments for the whole family.

Bremer was not so lucky. Bremer was Man Friday to Walton's Man Friday,—and that is never a very remunerate or appreciated job. Bremer got zero—all he was worth. This thing will all work out—for people, at last, are thinking. Henceforth they will want to know before they vote. Meanwhile, get ready to live under an autocrat for four long wearysome educative years.

### ORTHOPAEDIC SURGERY

Edited by Dr. Earl D. McBride,  
1096 1st Nat'l. Bank Bldg., Oklahoma City.

#### ABSTRACTS RELATIVE TO BONE NEOPLASMS

"Periosteal Sarcoma in Association with Osteomyelitis," R. L. Rhodes. Surgery, Gynecology, and Obstetrics, Oct. 1922.

Three cases are reported from which he gives the following summary:

1. The author reports three cases of large round cell sarcoma, periosteal origin, associated with infection and necrosis of bone.
2. All females, two white, one negro.
3. Ages, 14, 12, and 20 years, respectively.
4. Left tibia in each case.
5. No history of trauma or serious illness.
6. Local pain in two, none in the other.
7. Staphylococcus aureus infection in each.
8. Rapid pulse and rather high fever in two, none in the other.
9. Treatment, mid-thigh amputations.
10. Results, one dead, and two living free from signs of recurrence, local or elsewhere, to date.

Case 1. Developed in the hospital under our observation and we feel reasonably sure, therefore, that the osteomyelitis preceded the sarcoma.

Case 2. We questioned which preceded, although we did not suspect the infection and necrosis or abscess prior to operation, but found it upon dissection of the specimen. Might the

history, however, of attacks of pain—"growing pains" for several months preceding the development of the tumor—suggest infection or abscess as the original?

Case 3. Gave an indefinite history, and showed a well advanced growth when we first saw her. The specimen was interesting in that there was a rather sharp line of demarcation at the site of the pathological fracture of the tibia—extensive osteomyelitis of the shaft above, whereas below there was widespread invasion by sarcoma of bone and soft parts, extending downward even to the internal malleolus.—Earl D. McBride, M. D.

"Roentgen Diagnosis of the more important tumors of the long bones." Bernard H. Nichols. Surgery, Gynecology and Obstetrics, Sept. 1922.

The author collected a series of bone plates from various hospitals in New York City, representing most all the types of bone tumors found in the literature. In addition he makes the following classification of bone tumors:

1. Their origin—whether medullar or cortical.
2. Whether or not they are characterized by bone production, by bone destruction or by both.
3. The resulting condition of the cortex, whether expanded or destroyed.
4. Whether they are invasive or non-invasive in their growth.

He states that malignant tumors do not cross a joint, as cartilage to be a barrier to malignancy, so that a lesion involving both sides of a joint is always a benign process. Each type of bone tumor is described in detail and the article has many elegant illustrations.—Earl D. McBride, M. D.

### EYE, EAR, NOSE AND THROAT

Edited by Dr. Jas. C. Braswell,  
726 Mayo Bldg., Tulsa

Cancer of the Larynx. C. Jackson. Ann. Surg., 1923, lxxvii, 1.

Jackson states that cancer rarely, if ever, develops in a previously entirely normal larynx.

Persistent vocal abuse is one of the most common causes of chronic laryngitis, keratoses, papillomata and granulomata. When perpetuated by vocal abuse and other causes, these conditions may favor the development of cancer.

In twelve of the authors cases of cancer of the larynx a luetic lesion preceded the cancerous lesion.

Diseased tonsils should be considered as a cause of cancer of the larynx as focal infection in the tonsils may be the chief etiological factor in chronic laryngitis and chronic laryngitis may be a precancerous condition. The author is convinced that the chief factor in the etiology of laryngeal papillomata, granulomata and haematomata is some form of irritation, including that due to trauma and chronic inflammation.

The vocal cords are the parts of the larynx subject to the most irritation. The author has seen two cases in which an isolated cancerous lesion developed on one cord at a point exactly opposite a isolated cancerous lesion on the other cord. During phonation the lesions touched. In neither case was there any continuity between the lesions.

In the treatment of precancerous laryngeal le-

sions absolute rest of the larynx is essential. It is difficult to obtain such rest as the dusty atmosphere in most dwellings is injurious.

Laryngectomy is so mutilating that it is unwise to use it in a chronically inflamed larynx merely suspected to be cancerous.

The Radium Treatment of Carcinoma of the Mouth. L. A. Taussig. *Med. Clin. N Am.* 1922, vi, 383

Taussig thinks that a large percentage of the cases referred for radium treatment at the present time are the hopeless ones which have been treated unsuccessfully by surgery or in which the seeking of expert advice has been deferred until the possibility of cure has passed. The time is rapidly approaching when it will be possible to recognize the class of cases for radiotherapy given alone or in combination with surgery.

Cases are reported by the author to illustrate the types of mouth malignancy suitable for radium treatment.

One case was that of a man 40 years of age who first noticed an ulcer on the right side of his tongue about four months prior to the initial examination. The lesion was a fissure-like ulceration in a hard, nodular mass extending from just in front of the anterior pillar to within about four cm. of the tip of the tongue. The palpable induration extended well over the midline. Lues was ruled out by the Wassermann test. The lesion was too extensive for surgery or the actual cautery. The treatment of choice was unscreened tubes of radium emanation.

The tubes of radium emanation are inserted in the malignant tissue rather than in the normal tissue surrounding the malignant area. The true reaction which consists of a burning pain in the tongue and swelling, usually begins about one week later. The period and intensity of the reaction is variable depending to a large extent upon the dosage. If metastatic glands develop it is advisable to remove them surgically if possible. If the condition is not operable, bare tubes of radium should be inserted.

The author reports a second case in which he found a tumor on the inner surface of the left cheek of an upholstery worker about one year ago. The lesion was nodular, hard, about six cm. in diameter, and about one and one-half cm. high. The glands were not palpable. Five bare tubes, totalling 9.5 mc., were inserted into the mass. On account of the suspicious appearance of the tongue, mixed treatment was given for a time under the impression that the carcinoma might have developed on a lueric base. Within a month the reaction subsided and the mass had entirely receded. Two months after treatment a hemorrhage occurred. Five months later an area of increasing thickening was noticed. Additional treatment of four bare tubes was then given. Five months ago a hard nodule developed at the tip of the tongue. Two bare tubes totalling 1 mc. were inserted into the mass. The tongue is still tender but there is no evidence of recurrence. The author feels that this case has responded well to radiotherapy.

## GENERAL SURGERY

Edited by Dr. G. A. Wall,  
303 Palace Bldg., Tulsa

Prostatic Obstruction. A. F. Stevens: *Clinic of N. Y. Polyclinic. Surg. Clinics of N. A.* April 1923, p. 549.

The common belief among practitioners is that the familiar clinical picture of prostatic obstruction is always due to gross "hypertrophy" of the prostate and that the only effective treatment is prostatectomy. There are other types of obstruction described as though they were conditions different from and unrelated to the common one (adenoma). There are many types of prostatic obstruction, varying in form and pathology and each may cause the small group of symptoms.

He emphasizes the fact, that there are minor as well as major procedures which afford relief in properly selected cases, and these are at times valuable accessories to the major operation.

In practice the first consideration is diagnosis. Are we dealing with a prostatic obstruction, and, if so, what is the form and nature of it? Urinary findings with large amounts of urine due to "medical diseases" should be ruled out; also we must eliminate the cases of frequency due to increased irritability, the result of urinary tract inflammation, of calculus or of tumor at the vesical neck.

Residual urine is the commonest finding in all types of prostatic obstruction with symptoms. The author feels that our chief errors in diagnosis concern other causes of residual urine, notably, spinal cord disease and diverticulum of the bladder. The fault is due to sheer neglect in diagnosis which is rendered clear by careful methods of differentiation—neurologic examination, lumbar puncture and cystoscopy, etc.

Obstruction due to prostatic enlargement, in general requires nothing short of a prostatectomy for relief. He thinks that malignant disease is far from a settled problem, but its possible cure is to be considered. Radium has its exponents but as yet some workers of considerable experience lack enthusiasm. He feels that the possibility of a cure by radical complete surgical removal of the whole prostate and certain neighboring structures in selected cases of early malignancy cannot be discussed at this time. He gives as a third type of growth enlargement that is due to acute inflammation which may need medical and hygienic measures only, but if abscess forms surgical drainage becomes necessary.

The need for methods of determining the patient's fitness for operation and the means for improving the same are applicable to all types of obstruction. While he feels that laboratory tests are useful and helpful it seems necessary to continue to call attention to the greater value of clinical observations.

Good operators who were competent observers obtained excellent results before the present era of practical blood chemistry.

Tumors of the Breast. W. Jepson, in the *Journal Iowa State Med. Society*, 1923, xlii 4.

The mortality for 1920 shows 72931 cancer deaths, of which 6437 or 8.8 per cent was due to cancer of the breast.

Of 210 cases of breast carcinoma operated on, eighty-nine or 42 per cent were cured. Of these 210 cases 52 per cent had involvement of the

lymph glands of the axilla, and 71 per cent had involvement of both axillary and cervical nodes. These statistics from the clinic of Halstead. The senescent woman may know of a tumor in her breast, and suspect its character, but shrink from operative interference through fear that it will be of no avail, because she has known of some of the 50 per cent not saved by operation. Every failure to cure by operation prevents one or more from seeking timely aid. Some are deterred from seeking operation through thought of the magnitude of the operation.

The author feels that the breast should be regarded as a useless area of integument, harboring all the dangers of malignancy and its removal implies no loss of function or danger, therefore, in a case of tumor of the breast removal of the breast should not be delayed until a positive diagnosis of malignancy can be made.

A tentative preoperative diagnosis must be made from the physical characteristics, the clinical history and the patient's age. As a rule, the inflammatory conditions, hypertrophy and benign tumors, such as fibroma, adenoma and fibroadenoma may be differentiated on this basis. Benign growths usually in the precancerous stage are encapsulated, freely movable, painless and slow of growth. Chronic mastitis begins as benign condition and it is still not known whether it predisposes to cancer. Bloodgood had two cases of cancer in 329 cases of chronic mastitis: Spee found 15 per cent in 295 cases, and Ewing discovered precancerous changes in nearly 50 per cent of cystic disease of the breast.

Schimmelbusch considered the cystic disease only a transition stage to carcinoma.

The author states that if the growth is considered benign it may be left undisturbed (poor advice) or removed locally and sectioned (the proper procedure).

If there is any indication of malignancy at the time of local operation the complete operation may (should) be done. The author does not use the microscope at the time of operation (a pronounced mistake).

A cancerous breast should be completely removed with the axillary lymph nodes and the Pectoral muscle if they or their sheaths show any indications of involvement (more recent authorities insist on the removal of the sheath).

The hope of the future lies in the prevention or early recognition of the growth.—G. A. Wall, M. D., F. A. C. S.

**Thematastasizing Tendency of Oesophageal Carcinoma.** Gordon F. Helsley: *Annals Surg.* vol. lxxvii no. 3. Pp. 275.

Considerable attention has been given in the last two decades to the question of the radical surgical treatment of oesophageal carcinoma, and successful reactions have been made

The tendency to metastases should be considered and when these occur early, which they seem prone to do, radical operation is futile. Some good observers are of the opinion that this form of cancer is not prone to metastasise early, while so good an authority as Ewing writes that these tumors form early and extensive metastases.

Von Mielcki states that any series of cases did not show for carcinoma of the oesophagus a less pronounced tendency to metastasize than gastric cancer. He states that the possibility of metastases from gastric carcinoma is no contraindication to operation and he would hardly expect that

the possibility of metastases in carcinoma of the oesophagus would be advanced as a contraindication to operation, yet, that is being done in some of the best clinics in the world, even though the patients be comparatively young men in good condition and free from evidence of secondary growths. The author seems to think that cancer of the upper segment is less prone to metastases than any other part of the organ. In the authors series of cases, operative record and autopsy showed that two of the cases with a duration of the symptoms of eight and ten months were free from metastases, while two with a duration of one and five months showed metastases in the regional lymph nodes. His conclusions are as follows:

1. In 70 fatal cases of carcinoma of the oesophagus, metastases were present in 36 per cent. In 6 per cent the metastases were limited to the regional lymph nodes. This indicates a limited tendency to metastasise.

2. The average duration of symptoms, 4.8 months, in the patients who died without metastases indicates that in the majority of cases ample time is given for diagnosis and treatment before metastases occur.

3. However, the striking change for the worse in the pathological, the picture during the average of 69 days by which the group that survived gastrotomy outlived the group that succumbed thereto, gives warning of the speed with which metastases develops in a somewhat advanced stage of the disease.

4. Irrespective of the duration of the disease, the possibility of metastasis formation, without definite evidence of the same, should not be considered as contra-indication to radical operation.

#### NEW AND NON-OFFICIAL REMEDIES

The following articles advertised in our columns have been accepted for inclusion in New and Non-Official Remedies:

Parke, Davis and Company:

Pollen Extract Ragweed—P. D. & Co. Pollen Extract Timothy—P. D. & Co.

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Insulin:

Abbott Laboratories—Neutral Acriflavine—Abbott. Tablets—Neutral Acriflavine—Abbott, 0.03 Gm. (one-half gm.) Enteric Coated Tablets—Neutral Acriflavine, Abbott 0.03 Gm. (one-half Gr.)

Hyndon, Westcott & Dunning, Phenoltetrachlorophthalein—H. W. & D. Ampules Phenoltetrachlorophthalein—H. W. & D.

Powers—Weightman—Rosengarten Co. Carbon Tetrachloride C. P.—P. W. R.

Neutral Acriflavine—It has the actions and uses of acriflavine (see New and Non-official Remedies, 1923). Being neutral in reaction, it is claimed not to have the smarting and irritating effects of acriflavine solutions. Neutral Acriflavine is a brownish-red, odorless, granular powder. It is soluble in less than two parts of water, forming a brownish-red solution which fluoresces on dilution and which has a bitter taste. The Abbott Laboratories, Chicago, Ill. (*Jour. A. M. A.*, May 19, 1923, p. 1455.)

Neutral Acriflavine—Abbott—A brand of neutral acriflavine—N. N. R.—It is sold in substance and also in the form of Tablets Neutral Acriflavine—Abbott, 0.03 Gm. and Enteric Coated Tablets Neutral Acriflavine—Abbott, 0.03 Gm. The Abbott Laboratories, Chicago, Ill. (*Jour. A. M. A.*,

May 19, 1923, p. 1455.)

**Tincture No. 111 Digitalis**—P. D. & Co.—A fat-free tincture of digitalis which, standardized by the minimum lethal dose frog heart method of Houghton, is 50 per cent. stronger than tincture of digitalis—U. S. P. The actions and uses of tincture No. 111 digitalis—P. D. & Co., are the same as those of tincture of digitalis. It was introduced at a time when the "fat" of digitalis was believed to cause gastric disturbances. This claim of superiority is not tenable and the preparation is sold simply as a standardized tincture of digitalis. To minimize deterioration through light and air, the preparation is marketed in one ounce amber vials and saturated with carbon dioxide. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A., April 7, 1923, p. 1003.)

**Neo-Silvol**—A compound of silver iodid with a soluble gelatin base containing 18 to 22 per cent. of silver iodid in colloidal form. Neo-silvol, even in concentrated solutions, causes neither irritation of mucous membranes nor coagulation of albumin. It does not stain the skin. It is claimed that neo-silvol in laboratory tests for germicidal value has been found as effective as phenol in its action on bacteria. Neo-silvol is intended for the prophylaxis, and treatment of infections of accessible mucous membranes and is claimed to be indicated in affections of the genito-urinary tract and of the eye, ear, nose and throat. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A., April 28, 1923, p. 1218).

#### PROPAGANDA FOR REFORM

**Ethylene as an Anesthetic**—The Council on Pharmacy and Chemistry has published a preliminary report on the experimental status of ethylene as an anesthetic. A. B. Luckhardt and J. B. Carter report that animal experiments with ethylene indicate that ethylene has a direct action on the nervous system when a concentration of 90 per cent. is used; that the motor reflexes are abolished at this concentration, and that the phenomena produced by the undiluted gas is partly asphyxia, which factor can be removed by the addition of oxygen, when it is seen that narcosis results from the ethylene itself. Trials carried out on human subjects appear to confirm the anesthetic value of ethylene. The investigators believe that ethylene will be found more desirable than nitrous oxid, but the experiments reported have been carried out on persons in normal health only. The Council reports that confirmation of the work is necessary before ethylene can be admitted to New and Non-official Remedies, but that further research with the gas is warranted. As a preliminary to such research, the Council cautions that the quality of the product must be determined. (Jour. A. M. A., April 7, 1923, p. 1003.)

**Incompatibility of mercurochrome**—220 soluble with local anesthetics and alkaloids.—An accident from the precipitation of mercurochrome—220 soluble by procain has been reported. The A. M. A. Chemical laboratory has confirmed the incompatibility. The following local anesthetics were found to give precipitates when treated with mercurochrome—220 soluble solution: Alypin, apothetin, benzocain, butyn, cocain hydrochloride, B-eucain lactate, phenacain, procain, propaesin, quin and urea hydrochlorid, tropacocain hydrochlorid and stovain. Many vegetable alkaloids were also found to be incompatible with mercurochrome—220 soluble. (Jour. A. M. A., April 14, 1923, p. 1091.)

**The Treatment of Syphilis**—The general view is that neither mercury or arsphenamin positively cures in cases in which the disease has existed

long enough to become well established as a systemic disease, but that they both tend to cure and that both are valuable in treatment. It is the general opinion of syphilologists that when chances are seen that are unmistakable, these cases should be vigorously treated and that there is a good chance of aborting the disease at this time. If early cases are not treated until the Wassermann reaction has become positive, there is a difference of opinion as to treatment. There are syphilologists who believe that these early cases are better treated by mercury alone until the patient has had an opportunity to develop all the immunity of which he is capable. After the patient has established all the resistance of which he is capable, these syphilologists would treat with mercury and arsphenamin. It is becoming increasingly apparent that the advantage of the new method of treating syphilis in which arsphenamine plays the larger part, are by no means certain. The trend of the last few years has been in the direction of placing more reliance on mercury and the older methods in the treatment of syphilis. (Jour. A. M. A., April 21, 1923, p. 1167.)

**The Intracardiac Injection of Epinephrin**—Recently much publicity has been given to the power of epinephrin, when injected into the heart, to produce a response resulting in revivification when the heart has apparently ceased its action from certain causes. Of the many cases which have been reported, a remarkable one is that in which collapse occurred during an examination for extra-uterine pregnancy. After other methods had been tried without avail, an intracardiac injection of epinephrin was given. In ten seconds the heart sounds became perceptible. Four weeks later the patient was discharged as well. It must be borne in mind that the instances in which such restoration can be utilized are rare. When death comes as the result of the wearing away of tissues, as the result of toxic action of either bacterial or metallic poisons, or as the result of destruction of vital organs, it would be cruel and futile to arouse false hopes by what could only be a sensational experiment. (Jour. A. M. A., May 5, 1923, p. 1314).

**Fleischmann's Yeast Not Admitted to N. N. R.**—In March, 1921, the Council on Pharmacy and Chemistry took up the consideration of Fleischmann's Yeast on account of the extensive and extreme therapeutic claims which were made for this preparation. Since then the Council has given much attention to the subject of yeast therapy. After consulting with eminent students of nutrition and clinicians qualified to speak with authority on questions of nutrition, dieto-therapy and pediatrics, the Council concluded that there was little likelihood that the administration of yeast or yeast preparations will be of therapeutic value in many cases for which they are advised. The Council finds that many advertisements for Fleischmann's Yeast are misleading in that they tend to create the belief that many diseases are prevented or cured by its use. Advertisements addressed to physicians are likely to lead to the belief that the efficacy of yeast therapy in many conditions has been established. Advertisements addressed to the public are bound to create the opinion in the mind of the lay reader that reliance may be placed on yeast in many conditions. The Council refused recognition to Fleischmann's Yeast (1) because it is advertised by means of unwarranted and misleading therapeutic claims, and (2) because it is advertised to the public with unwarranted therapeutic claims that may become a detriment to the public health. (Jour. A. M. A., May 12, 1923, p. 1398).

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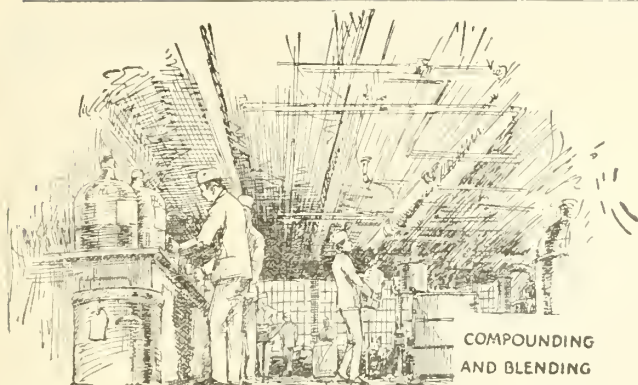
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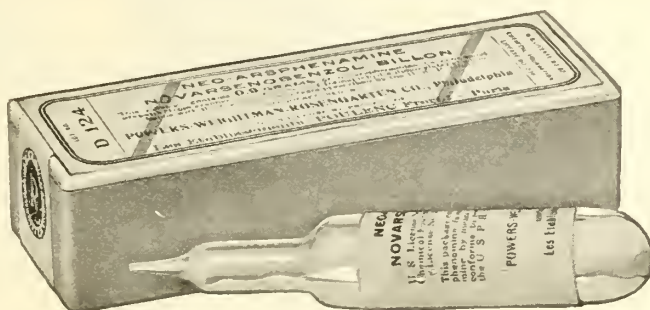
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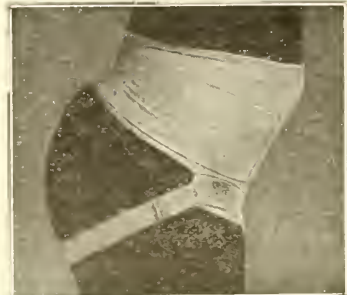
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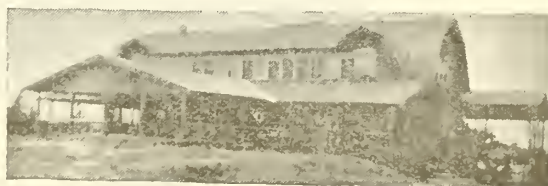
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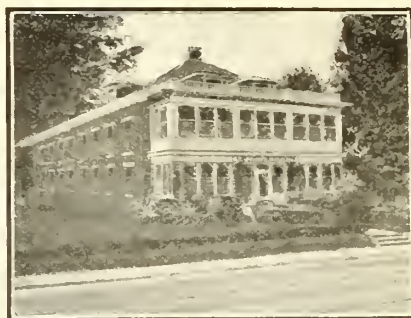
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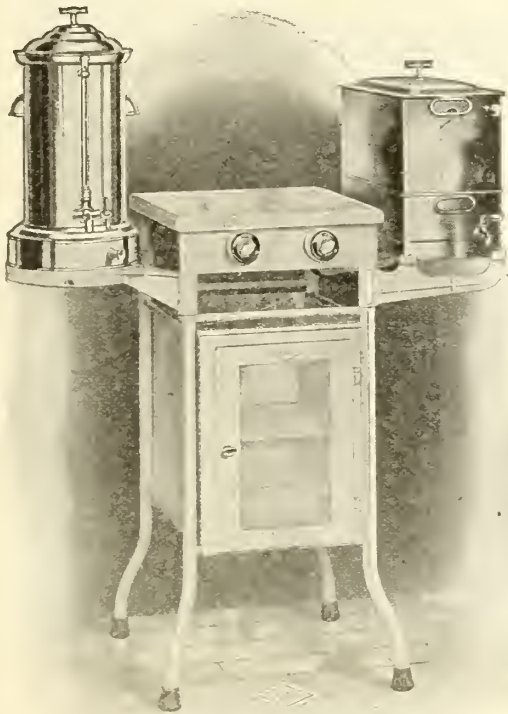
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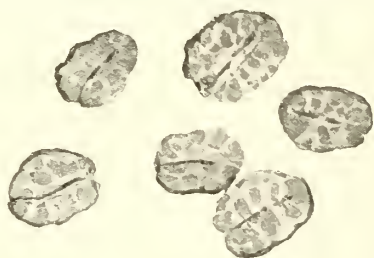
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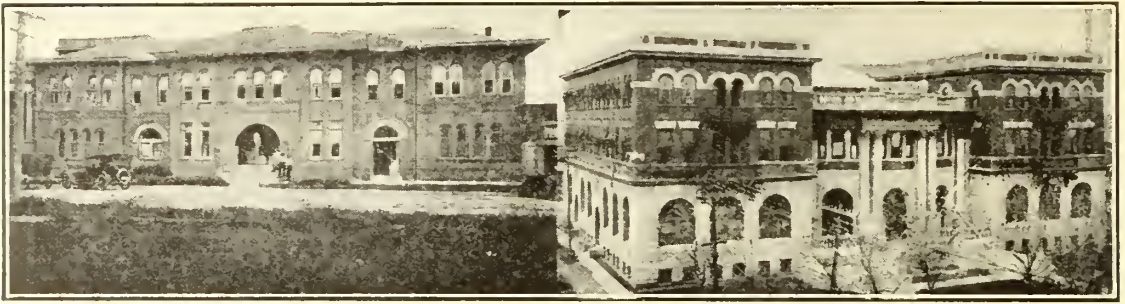
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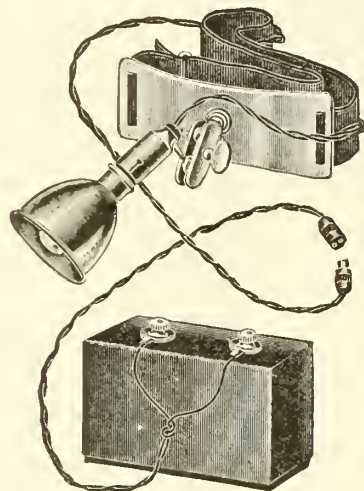
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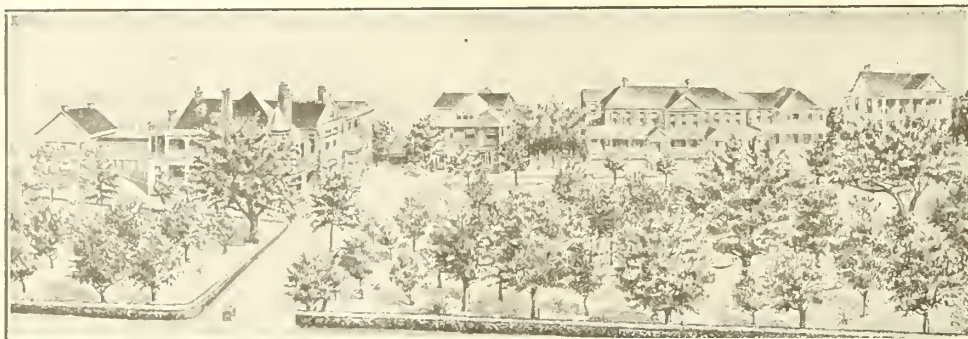
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### DIAGNOSIS AND TREATMENT OF VARIOUS TYPES OF HAY FEVER\*

RAY M. BALYEAT, A. M., M. D.  
Oklahoma City, Okla.

For many years it has been recognized that seasonal hay fever is caused chiefly by the pollens of plants, and many methods of treatment have been described. The fundamentals of treatment depend upon two factors: First, the accurate determination of the specific pollen protein to which the patient is sensitive, and second, the time and extent of desensitization to that specific protein.

The plants which cause hay fever are practically always the wind-pollinated plants. Almost any one of the large number of plants to which patients are exposed may cause hay fever in rare instances, especially if the flowers are deliberately smelled, or if they are grown in great profusion in close contact with an individual or when used as room decorations. These pollens will produce a positive skin test, but they are a minor fact in the hay fever problem. Treatment with these pollens is rarely necessary because the patients can easily avoid the cause of the symptoms.

Hay fever plants can be summarized as follows: The plant must be wind-pollinated; the flowers inconspicuous; the pollen small and buoyant, generated in profuse quantities and capable of being carried a great distance—the ragweeds, for instance, 15 microns in size, profuse in pollen and can be carried by the wind several miles. Plants having these characteristics are suspicious from a hay fever standpoint, but to be absolutely positive they must be capable of producing a hay fever reaction by means of the cutaneous test. The early writers blamed many harmless plants as the cause of hay fever, such as goldenrod, daisy, sunflower, roses, dandelion and many other bright flowers. These flowers bloom dur-

ing the hay fever season and many of them have a pollen which, in sensitive individuals, may produce a hay fever reaction or cause hay fever symptoms on direct contact, but they are insect-pollinated, the pollen is heavy and not found in the air.

Hay fever symptoms are more aggravated during high winds, as more pollen is shaken from the plants and the liberated pollen is carried to a greater distance. High temperature has very little, if any, direct effect on hay fever symptoms. A continued rain affords some relief to patients in many instances, the action of the rain is to precipitate the floating pollen and to prevent more pollen from arising from the plants. Following the rains, pollens are again carried into the air and continue their irritating effects. Hay fever patients are generally more distressed and their symptoms aggravated by the dust during a drive into the country, especially in a section where weeds and grass abound, as pollens are mixed with the dust and the passing of the vehicle stirs it up. This also applies to railway travel during the hay fever season. Dust in the house, public buildings, etc., during hay fever season is impregnated with hay fever pollens. Action of electric fans disturbs this dust and contained pollen which explains the discomfort of many hay fever patients at the theatre, places of business and in their homes when fans are used.

It has been demonstrated that of the wind-pollinated plants that distribute their pollen in enormous quantities and are carried the greatest distance by the wind are the ragweed. The grasses also distribute their pollen in enormous quantities, but on account of the greater size of their pollen, their potential area is more confined. This is also true of corn which gives a positive hay fever reaction and has an abundance of pollen, but is of little importance as a hay fever plant, as the size of the pollen is so large.

To simplify the question of pollen therapy, Scheppegegrell and others, after careful investigation, succeeded in segregating into groups the most important of the hay fever

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

plants. These groups are as follows:

(1) Trees, which play an important part in the cause of hay fever symptoms, especially the early spring type in some localities. In Oklahoma the trees are not a great factor in the hay fever problem. I have found the cottonwood to be the chief offender among the trees.

(2) Gramineae (grass family) the most important factor in spring hay fever, pollinating early and lasting until early summer. My experience has been that individuals sensitive to the pollens of grasses will give a hay fever reaction to several varieties. The chief offenders in this family in this state are bermuda grass, June grass and sweet vernal. Pollination begins the latter part of May. Hay fever symptoms due to the pollens of grasses are only moderately severe.

(3) Chenopodaceae (lambs-quarter, Russian thistle and dock) in Oklahoma is a fairly important group, especially in the western section, due to the profusion of Russian thistle. Symptoms from these pollens begin about the first of July. The treatment is very satisfactory.

(4) *Artemisia* (wormwood) is significant in the Pacific and Rocky Mountain states. It is also of significance in western Texas. It plays practically no part in our own state.

(5) *Amarantha* (pigweed family) is a fairly important factor in this state. This group includes the pigweed and the careless weed.

(6) Ambrosiaceae (rag weed) is the most important of all the groups and is responsible for at least 80 per cent of fall hay fever in the state of Oklahoma. In the East, the slender ragweed (*ambrosia elatior*) is the principal offender, while the giant ragweed (*ambrosia trifida*) is of chief importance in this state.

Hay fever due to pollens, unless complicated with a bacterial infection, is seasonal in type, the onset of the symptoms beginning about the same time of the year, varying slightly with prevailing weather conditions. Many seasonal hay fever patients have superimposed a bacterial infection which gives them hay fever symptoms throughout the year. True, perennial hay fever may be due to the foods or the protein of animal hair, face powder, hair dye, etc. I have observed several patients of this type who were entirely relieved of their symptoms from the elimination of the toxic element.

The complete and thorough diagnosis of a hay fever patient is imperative, and the

importance of the cutaneous test is conceded by all authorities. The intradermal test is complicated and very misleading. The cutaneous test is harmless, simple in technique and specific. A positive reaction consists of a raised urticarial wheal surrounded by a zone of erythema. The wheal should measure at least 5 mm. in diameter. Most patients will react to several members of the same family group. That is to say, a patient, who is preponderantly sensitized to one of the rag weeds will give minor reactions to other members of the composite family. So far as treatment is concerned, the minor reactions should be ignored, and the pollen giving the major reaction should be chosen for treatment. Patients sensitive to the composite group alone require only one pollen for treatment. If the one giving one of the major reactions is selected for treatment, it will convey a tolerance for all the other members of that botanical group. However, desensitization to one group will convey no tolerance at all to an unrelated group. Patients, sensitive to both the composite and the gramineae family require separate and dis-associated treatments with their respective pollen extracts, and, of course, at difference times of the year. These extracts cannot be combined. The use of mixed pollen extracts is condemned by all authorities.

Black and Black of Dallas, Texas, find most of their patients to be either vernal or autumnal in type, but not reacting to pollens of both groups. My experience, as well as that of many others who are working in this field, is very much different. I find that at least one-third of my patients belonging to the autumnal group are also quite sensitive to one member of the gramineae family. These patients have mild hay fever symptoms during June and July, ending in August and September with severe symptoms. If this fact is not taken into consideration, and those patients who are sensitive to a member of the grass family are not desensitized to the same, the best results from fall treatment of them cannot be hoped for. The pollen from the grasses irritates the mucous membrane of the nasal passage, thus producing excellent soil for irritation by the fall pollens.

There is a group of plants, including lambs-quarter and Russian thistle, which is of significance as a cause of hay fever in the territory west of El Reno. These plants begin to pollinate about the first of July. The symptoms are only moderately severe, but again they are good producers of soil for the ragweed pollen. In those

cases in which the patient is sensitive to both this group and the fall group, it is very important that the patient be desensitized to this group, and later, to the fall group. The treatment of those patients who are sensitive only to the midsummer group is proving to be very satisfactory.

There is a class of hay fever patients who are not sensitive to the protein or pollen of plants, but to the protein of various dusts, such as orris root and rice in face powder, dander of different feathers and hairs, and to the protein of foods.

There is another class of so-called hay fever patients that on being tested are not found sensitive to any protein. This is a so-called vaso-motor type of rhinitis. Personally, I believe that this type of rhinitis has a protein background, probably due to the split proteins of metabolism.

Successful treatment depends upon determining definitely the proteins to which the patients are sensitive, and the care and degree of desensitization. Several commercial firms have placed on the market pollen proteins for the treatment of hay fever. Most of them are fool-proof so far as injury to the patient is concerned. The majority of these firms have collected eastern pollens. For this reason, we cannot hope to obtain the best results with their products. In the first place, to treat every patient the same, by giving 10, 12 or 15 doses according to their outline, does not seem reasonable, as some patients do not require as heavy doses of the pollen extract for complete desensitization as others do. Again, I find patients who are not sensitive, or only slightly so, to the eastern ragweed pollen, but who are very sensitive to the pollen of the Oklahoma ragweed.

To obtain good results, one should use for treatment pollens secured from the native plants and prepared in such dilutions that the dose may be gradually increased to the physiological limit, instead of giving 10, 12 or 15 doses according to commercial outline. The schedule of treatment as outlined by Walker and others, with some modifications, is as follows: Test the patient with the various dilutions and begin desensitizing with that dilution which is just lower than the greatest dilution to which the patient is sensitive. Most patients are sensitive to the dilution 1-5000, therefore, begin with 1-10,000 sol.; 1:10,000, give 0.15 C. C.; 1:5,000, give 0.15 C. C., 0.25 C. C., 0.35 C. C., 0.45 C. C.; 1:1,000, give 0.15 C. C., 0.25 C. C.; 1:500, give 0.15 C. C.; 0.25 C. C., 0.35 C. C., 0.45 C. C.; 1:100, give

0.15 C. C., 0.2 C. C., 0.25 C. C. Each dose should preferably be given from 5 to 7 day intervals.

Experience has shown that any treatment other than pre-seasonal is not satisfactory. The treatment should be stopped 5 to 7 days previous to the onset of symptoms. Co-seasonal treatment is even dangerous, as the dosage cannot be regulated. If good results are to be obtained in the treatment of hay fever, details and accuracy must be given careful attention.

### IMPORTANCE OF PROPER FOOD AFTER WEANING\*

CARL PUCKETT, M. D.  
Pryor, Okla.

I have chosen this subject because I see the results of improper feeding and malnutrition every day in my practice and because I have observed that children fall off from four to six per cent more below perfection between twelve and twenty-four months of age in far too many instances and as a general rule do not measure up to the same standard of perfection at the end of the second, third and fourth years as the first and I believe it is largely due to the fact that they are treated too much as adults from a feeding standpoint. The recent epidemic of influenza has shown who gets through this debilitating disease in the shortest time and the fewest complications and it is he who is well nourished, robust, of good constitution and of course has pure air twenty-four hours of the day. In the past I have urged fresh air as essential to throwing off disease and still believe that essential but proper food should go along about fifty-fifty with this.

We all know that a big per cent of sickness is among the poor and certainly much of this is due to malnutrition which may have extended throughout life. It is not always that they have lacked the quantity or variety of food, either, in many cases, but the right preparation. Food improperly cooked not only is not palatable but may have many essential food elements actually destroyed, aside from its indigestibility, for we know that some destruction occurs with perfect cooking. Up until the last few years we thought we had food analyzed perfectly into proteid, fat and carbohydrate, and when fed those in correct proportions the food question could be dismissed as a

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

cause of disease but now we know that food knowledge was painfully short of perfection. The accessory food factors, food hormones or vitamins are just as essential as our proteid, fat and carbohydrate. Infant feeding was taught a few years ago to refer chiefly to those who had to be artificially fed and we thought we had the science down so perfectly that we more readily consented to feeding babies artificially than now. We think we know a great deal now but realize more fully that there is yet much to learn and are more inclined to rely on breast feeding with supervision of the mother.

We eat for bodily repair, heat production and growth and as the latter has only to do with child life he is in a nutritional class of his own and this is exceedingly important because in this period the foundation of life is being laid and if improperly done thorough correction can never be made. If your structure is made from poor material it can never be entirely replaced. You may be able to veneer the imperfect body but it never has the stability of the real thing. When our men were examined for the draft and we found one in four wholly unfit our nation awoke to the fact that something was radically wrong. Early feeding of the right sort will do much to prevent a condition like this. I am discussing the subject of food after weaning but fully realize there is a wide field for discussion in proper nutrition of nursing mothers and that many cases of malnutrition start with breast feeding. But in the average home the nursing baby gets along fairly well. We might say this period of feeding is more or less fool-proof. It is when the baby begins to eat that trouble begins. He thinks he knows what he wants which is all that is before him and that any food in the day and in most homes he gets what he wants because he is the baby. He is currently minded away from a hot stove too far so from the food that is perhaps more dangerous. The modern baby shows up our country fairs have shown us much. The one year old babies may run from 96 to 98 per cent perfect and in fact usually run quite high but when the same ones come back at the end of the second year they drop to 90 or 92 per cent. This certainly indicates that intelligence is not used in feeding causing a period of stunting which must be later overcome to get back near perfection. Breeders of blooded stock know that the young must never have a period of stunting if they would raise prize winners which means perfect stock. Undoubtedly the same rule should apply to the

young human. It is because of this that I am calling your attention as physicians to the feeding problem. Among all your families you have some opportunity to advise on the food question and when it comes you should be prepared to discuss the subject intelligently and give some real advice. Of course we have learned to give real diet lists for diabetes, nephritis and a little more vague for tuberculosis and then the average physician is about through. But why not prevent other things by giving the right food at the right time correctly prepared? It is easy to do if we try. Undoubtedly all diseases are brought on more or less by an imperfect makeup or combination of elements of the body. We do not need to try to divide the foods as we would the dosage of drugs but give general directions for the varieties so that there is a certainty of nature picking up what is needed here and there to weld into a perfect mechanism. We must be able to give general directions for the proper varieties of foods and their preparation and at least urge the mothers to rotate their foods and manner of cooking because in feeding little ones we may have the right elements chemically and "vitaminly," if you please, and then fall down on account of the revolt of these little ones at the monotony. But in the real malnourished cases we should give written directions for the foods or we may fail on account of the shortcoming of the mother or her laxity in carrying out instructions. Written directions, like medicine, are more likely to be followed than advice. We should find out what our little patients are eating and then be able to add what else is needed, and especially must we become familiar with vegetables and their correct preparation for food. The difference between the bloom of health and the pallor of malnutrition in children is the difference between milk and green vegetables and their absence, or even scantiness in the dietary; and, green foods can be fed to year old babies such as asparagus tips, spinach, young green peas and green beans. An eminent and reliable authority has stated that a bushel of grain has five times as much food value as the meat and milk that can be produced from it and of course this is true of vegetables. Therefore, from an economic standpoint we must stress the foods other than meat even if we must, and should, continue to urge milk drinking. All experiments show that the most efficient foods are cereals supplemented by milk and green vegetables. During the year of severe food regulation in Denmark or during the late war the death rate dropped 34

per cent which shows that scientific feeding pays and if this is true of the whole population it is more useful as applied to children and the physician is the one to have it applied.

If we see that our little patients get a variety of foods correctly prepared we are laying the foundation for future good health since food habits, likes and dislikes are usually continued throughout life. Most of us follow our appetites and if they are trained correctly while young we are most likely to continue to keep them right through life. We all understand that mental training in the young must be right for a future good citizen. But before we train we, by all means, must build something to train. It is certainly true that mentality is affected by diet. Surely the brain requires as pure food and the many different elements for its proper development as the body. Pure, red, oxygenated and vitaminized blood must flow through the growing brain to enable it to develop to its fullest capacity. When we speak of malnutrition we must realize that it applies to the whole, including body, mind and perhaps spirit. Malnutrition is present in no less than 20 per cent of our population of children, some experts say more, and this is general and not just in the slums. The farm babies are malnourished in many cases worse than in the small towns and cities and yet they have food possibilities all around them. I see many homes where the children drink coffee and the family income is largely derived from the sale of milk to creameries and these children get what they want, too. Our country of wealth, abundance, food going to waste, not enough markets for the surplus and yet 20 per cent of the children suffering from malnutrition! Talk about teaching pure Americanism, patriotism and preparation for national defense, what more can we do than to open the eyes of our mothers so that they can raise real men and women instead of future citizens who are about 25 per cent below normal.

We pride ourselves on being able to make early diagnoses in what we term the deficiency diseases such as scurvy, rickets, pellagra and beri beri. If this is what the disease or conditions are undoubtedly they start long before anybody can classify them. Pellagra sometimes apparently begins as early as the second year and this is reasonable for it shows up clearly in later life as a result of improper diet and it surely begins with the beginning of improper food which is usually after weaning. We are frequently consulted, too, in cases of this

sort and then is our chance to lay before the parents the possibilities and then cure, not prevent, because something certainly is the matter. If we outline a proper general diet and its preparation we will cure whatever is present and the actual diagnosis is unimportant. If we handle these problems with a certainty born of knowledge of our business it means just as many and better fees than we have been getting and we are in the profession for a living wage at least. But further than that we all like to do something worth while and what more can we do than to lay the foundation for national good health?

We are called on to treat children subject to chronic colds at an early age. We perhaps find beginning enlargement of tonsils and adenoids, then give tonics and advice about fresh air but I do not believe we go into the food question very thoroughly. We probably say the child is a little young for operation for removal of these defects. If he is too young he is young enough for these defects to be largely cured, or overcome by a well ordered existence which includes a balanced diet. We understand that future tuberculosis has its inception in diseased noses, throats and mouths and if this is true the conquest of this plague will be hastened by proper management and feeding of little ones. No doubt all our disease plagues are largely due to early constitutional deficiencies. If a child does contract the many infectious diseases that appear to be inevitable he will go through them with the minimum amount of harm if he has a good foundation of health and many infectious diseases that we do not consider inevitable will miss him altogether. Other conditions that take their toll in ill-health and death such as appendicitis, cholecystitis, and hemorrhoids are undoubtedly due in many instances to improper early feeding. But by all means let us conquer the deficiency diseases by prescribing the proper food and I mean conquer them when we are not able to recognize them for they certainly begin on a small scale long before any positive evidence is present. We frequently hear someone say he is about "half sick" or "feels like thirty cents" and it may be he about "half has pellagra" or is about thirty per cent on his way to some other malady due to deficiency from bad eating. The little tots do not express their feelings in words but their actions usually are more eloquent and we should not fail to recognize the unspoken expressions.

In conclusion I would impress on you that in proper food after weaning we largely

eliminate malnutrition and its consequent disorders. We help to build good health which means happiness and contentment and this is essential to the prosperity of our country and conducive to the fullest measure of patriotism. Also, through this means we do our part in furthering what has been termed constructive medicine.

**Discussion:** Dr. H. M. Williams, Oklahoma City, Okla.

The doctor has presented today in his paper a subject of unusual importance, one that has been very much neglected by our profession.

In recent years there has been a great deal written on the subject of infantile feeding, but very little has been written regarding the early childhood life as to proper diet.

"DENNET" boldly makes the statement that fifty per cent of all children's sickness between the ages of one and five years, that present themselves to the physician, their ailments are due to irregularity in diet of some form. The "essayist" has well covered and emphasized the importance of the subject.

It is a well known fact that the farmer knows exactly what the height and weight of his stock should be at the ages of one to three years, to have proper growth and development. The average mother knows how to systematically conduct the everyday household duties, but should you ask either as to what the height and weight of a child should be at the age of three years, it would be surprising how few would be able to answer intelligently. A better knowledge of these facts are therefore important and it is the duty of the family physician to see that the families who are under his care, are in the possession of this knowledge, that the child may have an equal chance for proper development along with the farmer's stock.

The essentials of food are to maintain nutrition and allow growth, it should be digestible, it should contain proper quantities estimated by calories, which is a very simple process and not difficult to understand. The average baby at the age of one, weighs about twenty and one-half pounds and should be about twenty-seven inches in height. This same child will show an increase of an average of two and one-half inches of growth per year, until eight years of age, when the height should be about forty-seven inches, though during the sec-

ond year this growth is about four inches, inches and so on. The weight of the infant during the third year practically three doubles during the first six months, the weight increases about one-half pound per month, during the second year of life this increase should continue at the rate of one-half pound per month and so on, this condition can be maintained only by feeding proper diet. One of the most common errors is, that the child is not taught soon enough the use of vegetables as a diet. A child should be taught at the age of sixteen months the use of vegetables as outlined by the doctor. We frequently see an undeveloped child that has formed the habit of dirt eating. This is due to not receiving the proper diet which is supplied in vegetables. Children, if taught younger in life the proper method of eating the essential foods, as they grow older, this habit will become a fixed principle in their life. One of the greatest errors that we meet in adult life, is too strong a proteid diet. Another common error in the diet of the child is too frequent feeding. After they have reached the age of sixteen months, there should be no eating between meals other than an occasional glass of milk, for at this age of life the child should be taught the use of vegetables, should be eating eggs and potatoes and allowed meat at least once a day, properly prepared.

It is a very common thing for the physician, when asked by the anxious mother, relative to the child's diet, to emphasize what not to eat, but he fails to submit the list of diets to this mother that would contain the essential elements for proper development of the growing child. More attention should be given this matter of proper food for the child at the weaning period, then there will be fewer undeveloped children at the age of two years or more.

#### THE DIARRHEAL DISEASES OF INFANTS AND CHILDREN\*

CARROLL M. POUNDERS, M. D.  
Oklahoma City

The term diarrhea, of course, includes all conditions attended by frequent, loose evacuations of the bowels. Normally, the character and frequency of the stools depends on several factors. Generally speaking a breast fed baby has three or four movements daily while artificially fed ones do not have more than one or two.

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

The mortality from the diarrheal diseases or so-called "summer complaint" has been rather high. Some idea of the importance of this condition can be gained by reference to the following figures, fairly recently compiled. They cover a period of five years and show the mortality from the diarrheal disease in children under two years of age as compared with that from certain infectious diseases in people of all ages in a large city.<sup>1</sup>

Measles, all ages.....	3,378
Scarlet fever, all ages.....	4,152
Whooping cough, all ages.....	2,000
Typhoid fever, all ages.....	3,523
Diphtheria, all ages.....	10,277

Total .....	23,330
Diarrheal Diseases, under two years.....	26,563

From this it will be seen that more deaths occur in children under two years of age from this cause annually than occur at all ages from five of the most common infectious diseases.

#### Classification

Probably the best classification up to the present time is that given by Porter and Carter<sup>2</sup>. They divide them into:

- (1) Mechanical diarrheas.
- (2) Fermentative diarrhea.
- (3) Proteolytic diarrhea.
- (4) Infectious diarrhea.

Mechanical diarrheas always result from taking of unsuitable food or foreign bodies, such as dirt or paper or from over-feeding. This condition is easily corrected, as a rule, and will not be discussed here.

The proteolytic diarrhea depends on the presence of a proteolyzing organism or substance. It is characterized by foul, yellowish or brownish stools which are alkaline in reaction. The symptoms are much the same as those of the other diarrheas. Obviously the main point in the treatment is the withdrawal of all proteins from the food. The symptoms are treated just as are those of the other types. It will not be discussed in detail.

The two types with which we commonly have to deal are the fermentative diarrhea and the infectious diarrhea. These will be discussed a little more in detail. Fundamentally, the difference between the two types is this: Fermentative diarrhea is a condition in which fermentation takes place in the intestines due to an abnormal growth and development of organisms in the intestinal contents. In other words, it is an infection of the intestinal contents and not

of the intestinal wall. In infectious diarrhea there is a definite infection which attacks the intestinal wall and produces distinct lesions there, rather than attacking the intestinal contents. In the fermentative type, definite pathological changes are slight or absent. In the infectious type, well defined lesions are usually present at autopsy. These are usually found in the colon and lower portion of the ileum and vary from a simple catarrhal inflammation in the mildest cases to a condition of extensive ulceration.

Practically the same conditions predispose to both types. Everything that lowers the general vitality and resistance is a predisposing cause, such as chronic indigestion, rickets, marasmus, teething, etc. They are seen mostly in children under two years of age and during the hot summer months. About 95 per cent of the severe cases are in artificially fed babies. Poverty, overcrowding, bad food, neglect and poor hygiene have a large share in the responsibility.

As to the exciting cause. That of the fermentative type has not been well worked out. There seems to be a great deal of evidence that the bacillus perfringens of Tisser is responsible in a great many cases. It is probable that the condition is caused largely by an abnormal activity of certain fermenting bacteria that are normally present in the intestinal tract.

The exciting cause of the infectious diarrhea is better understood. The dysentery bacillus, in its various strains, has been definitely identified as an etiological factor. The gas bacillus has been found present in great numbers in some epidemics. And there is evidence that the streptococcus and the bacillus pyocyaneus sometimes are responsible. Whatever the causative agent is, it is very likely that it enters the alimentary tract through the medium of contaminated food, especially milk, or through water or is taken into the mouth by the hands or any other object which the child may put into its mouth. And it is also quite possible that infection takes place only in those cases where the resistance of the alimentary tract against such infections has been lowered by a derangement of digestion due to extremely hot weather, lack of cleanliness, or ingestion of improper food, etc. While essentially hot weather diseases, a few cases are seen all the year round. In this climate they seem to be more noticeable during the months of July and August.

#### SYMPTOMS

In both types the onset is usually rather

sudden. As a rule, the first thing noticed is the diarrhea. The stools are anywhere from ten to twenty-four or more daily. There is, in most instances, some elevation of temperature, the degree depending on the amount of toxic absorption. It ranges anywhere from 101 to 104 or 105. In the fermentative type it is apt to be higher for four or five days and then drop. In the infectious type it is rarely higher than 101 or 102 but keeps up with little variation as long as the infection is active which may be for a period of weeks. Vomiting is not common in either type and when present is due to the toxin. There is a loss of appetite and the aversion to food is so great at times that it is difficult to give any form of nourishment. There is a moderate leucocytosis, usually around 20,000, with an increase in the polymorphonuclear leucocytes. The urine of course is diminished.

In the fermentative type the abdomen is often distended. There is not a great deal of abdominal pain, tenesmus or tenderness. The stools are greenish, watery, strongly acid in reaction and odor, and irritating to the skin. They contain much mucus, may contain undigested small, soft, fat curds.

In the infectious type, due to the intestinal lesions, the stools show the presence of numerous blood quanta early and in a day or two are made up mostly of this. Pus may be present microscopically and is always present macroscopically. The stools are greenish brown or have the smell of wet dog, and are usually always alkaline in reaction. There is a great deal of pain in the abdomen, the tenesmus is quite intense. Proctitis of the rectum, resulting from the local straining, is not uncommon. The abdomen, instead of being distended as in the other type, is more often somewhat sunken. There may be some tenderness over the colon.

In both types there is usually a rapid loss of fluids on account of the frequent loose stools, and there often develops a marked condition of dehydration and anemia.

The main points of differentiation between the two conditions then, are:

(1) Fermentative diarrhea is simply a fermentation of the intestinal contents with no invasion of the intestinal mucosa by the organisms. Infectious diarrhea is a definite bacterial invasion of the intestinal walls and other body tissues.

(2) In fermentative diarrhea the temperature is apt to be higher with a drop at the end of four or five days. In the infec-

tious type the temperature is not high but runs a steady course for a period of several days or weeks.

(3) In the fermentative type the abdomen is commonly distended, but there is little abdominal pain or tenesmus. In the infectious type the abdomen is usually flat or sunken, there is a great deal of abdominal pain and tenesmus and may be some tenderness to pressure.

(4) The character of the stools is different—in the fermentative type there is a green, watery, irritating stool, acid to litmus and it may show small gas bubbles. The infectious type of stool is characterized by the presence of pus and blood, very little odor and an alkaline reaction.

The laboratory differentiation will not be taken up as it is not always possible or practical to carry it out.

### Prognosis

In cases of fermentative diarrhea, which show marked toxemia, the outlook is always grave. If they get through the first four or five days their chances of recovery are good.

In the infectious type, the prognosis should always be guarded. It is impossible to tell what the outcome is going to be. Most of the deaths occur during the second week. Some recover from the immediate attack but linger along and die at the end of two or three months from malnutrition.

### Treatment

Discussing the treatment consists of discussing the following points:

- (1) The initial purgation.
- (2) The period of starvation.
- (3) The proper diet.
- (4) How best to control the temperature, toxemia, dehydration and acidosis.
- (5) Drugs.

The treatment of both conditions is almost the same, except as to diet. This will be taken up in some detail. Taking up the different measures in their order:

#### The Initial Purgation.

The first thing to do is to clean out the alimentary tract thoroughly. Castor oil in doses ranging from two teaspoonful to two tablespoonful, depending on the age of the child, should be employed. If this cannot be retained, the next best thing is calomel in doses of one tenth grain each with one grain of bicarbonate of soda given every half hour till one grain is given. This should be followed in two or three hours

after the last dose with two or three teaspoonsful of milk of magnesia.

### **The period starvation.**

No food should be given, as a rule, for twenty-four hours. It is not desirable to starve them any longer than this. During this time it is important to see that the child gets at least as much fluids as it would normally take, which is about three ounces per pound of body weight each twenty-four hours during the first year and about two ounces per pound during the second year. This can be given in the form of plain water, barley water or weak tea. Personally, I prefer barley water, sweetened with saccharin.

### **The diet.**

This is probably the most important part of the treatment and its character depends on the type of diarrhea. The average case should receive some form of food after twenty-four hours of starvation.

In the fermentative type, where we have the greenish, watery, highly acid, fermenting stool, there is a distinct indication for a certain type of food. The organisms that seem to be responsible for the trouble here thrive on a carbohydrate medium. Whenever there is an excessive amount of fermentation of carbohydrates, there is apt to be some breaking down of the fats as well. So the indication is for a food that is high in protein and low in both fats and carbohydrates. The ideal food here is protein milk made from skimmed milk. If sweetened with saccharin, this is usually well taken—using one grain of saccharin to each quart. It should be given in small quantities at first—say half an ounce per pound of body weight each twenty-four hours, the first day and this gradually raised until it is given diluted with one third of water or in full strength in amounts equivalent to what the child would ordinarily take of a formula. In two or three days, when the condition has improved as evidenced by fewer bowel movements and a difference in their character, sugar in the form of dextri-maltose is gradually added. The child can be kept on this for quite a while. As soon as the bowel movements become reduced to five or six daily the protein milk should be gradually replaced by boiled skimmed milk. The fats should be withheld for weeks afterwards, as they do not seem to tolerate them well. Next to protein milk comes lactic acid milk as a diet, and if neither of these can be had, boiled skimmed milk may be used cautiously.

As to the infectious type, Morse and his associates seem to have arrived at the most logical solution<sup>3</sup>. We are dealing, in most cases, with the dysentery group of organisms. These have been found to grow on either carbohydrate or protein media. Growing on protein media they produce toxic substances. On carbohydrate media they produce harmless products. Both media being present the carbohydrates are acted upon before the proteins are attacked. So the indications are for a food containing mostly carbohydrates and very little or no fats or proteins (the fats are never well born). So these cases should be put on a sugar solution. Lactose is the sugar of choice because it is more slowly broken down and furnishes a carbohydrate medium for a longer time. It should be used in a five to seven per cent solution. In from one to three days this is made up in barley water. In from one to five days more, depending on the symptoms and amount of improvement, small amounts of boiled, skimmed milk are added. This is cautiously raised until it is given in amounts equivalent to what the child would ordinarily take—the amount of sugar being properly adjusted. The fats are withheld until all symptoms are gone and then are very cautiously added. In those cases where the gas bacillus is the cause, there will be evidences of marked distention, etc. Here, of course, the same diet is used as in the fermentative type.

No matter what the indications are, if a diet does not seem to agree, this should be discontinued and something else tried.

As to the temperature, toxemia, dehydration and acidosis. The one indication here is for plenty of fluids. They take fluids poorly and lose them rapidly through the frequent loose bowel movements. As shown by Marriott, Schloss, Reiss and others, there is an increase in the blood concentration, the kidneys do not eliminate properly, the acid base balance is not properly regulated and the result is a condition of dehydration, toxemia and acidosis. Fluids can be given by mouth, subcutaneously, intraperitoneally and intravenously. In the mild cases we can usually give enough fluids by mouth. In the cases that show a marked dehydration, it is usually necessary to give them by some other way. For this purpose normal saline is employed subcutaneously or intraperitoneally. In extreme cases it may be necessary to give fluids intravenously. Here a 10 per cent solution of glucose is used. As pointed out by Schloss<sup>4</sup> a hypertonic solution should never

be given into the vein until a certain amount of an isotonic solution has been given into the tissues.

Drugs play a very small part in the treatment except for the initial purgation. Hot stupes to the abdomen may help control the pain and tenesmus. Opium in the form of paregoric may be given to control the tenesmus and straining only after the toxic state has subsided. It is doubtful if bismuth does any good and it may do harm. At times stimulants are necessary, adrenalin and caffeine may be used.

The serum treatment has not met with a great deal of success up to the present time.

1. Diseases of Infancy and Childhood—Holt and Howland.

2. Management of the Sick Infant—Porter and Carter.

4. Diseases of Nutrition and Infant Feeding—Morse and Talbot.

4. Schloss, Oscar M., The Treatment of Dehydration in Infants. The Boston Medical and Surgical Journal 187-427 (Sept. 21, 1922).

#### PREVENTION OF DISEASES IN INFANCY AND EARLY CHILDHOOD\*

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In presenting this subject, it is well that we begin with the prenatal care of the mother as the health of the pregnant woman has much influence on the health of the expected child. These mothers should have a rigid physical examination during the second month of pregnancy, followed by frequent observations and examinations during term. If this could be done in all cases, much would be accomplished to reduce the mortality in early child life.

In the new born, the one great outstanding cause of death is cerebral injury. In the past, these deaths were listed as congenital debility and in other indefinite terms, but now, from post mortem findings, it is stated that as high as 50 per cent of these deaths are due to some traumatic lesions or a hemorrhagic diathesis. Hemorrhage of the brain occurs in a large proportion of births but many cases are so slight that symptoms are not produced and a spontaneous recovery takes place. Indefinite symptoms in some cases may be produced and only after a very careful examination, a diagnosis can be made. Continued cyanosis and difficult breathing with-

out heart or lung findings are very suspicious signs while convulsions or even slight twitchings point the way to an investigation, and a bulging fontanel is a very important symptom. Ehrenfest gives the following causes of these intra-cranial lesions:

(1) They are produced by the mechanical exaggeration of the physiologic process of molding, resulting in excessive or sudden compression of the fetal skull.

(2) They are prone to occur in the course of a normal labor if prematurity predisposes the infant to traumatic lesions.

(3) They are necessarily aggravated by a hemorrhagic diathesis or by inappropriate manipulation during resuscitation. The condition of the newborn that survives these brain injuries is not recognized until the babe is three or four months old when the child is brought to you with spastic paralysis. At least six cases have come under my observation during the past year and all were children of primiparas and with histories of spontaneous deliveries. All of these cases were from the rural district, two having no doctor in attendance and two were given pituitary extract, but all gave histories of the bearing down and pulling on sheets early in labor which forced the head against and through an incompletely dilated cervix or through a rigid vulval ring. We find much of this practice in private homes and it should be discouraged until we get complete dilatation. Large doses of pituitary extract endanger the child, especially when it is employed to overcome mechanical difficulties, while if less or none were given in the first stage and more scopolamin were used at this time to produce relaxation and sleep between pains, traumatic birth injuries would be greatly reduced. Whenever such an injury is suspected, the clotting time of the infant's blood should be ascertained and a spinal puncture made, the first as a diagnostic means and the latter as a diagnostic and early therapeutic measure.

Nutrition of the newborn is as important as later in childhood and this is where most mistakes are made. It is not an uncommon thing to find the baby taken from the breast following a hasty decision that the mother's milk does not agree with the child or that she has insufficient quantity to nurse him. Ninety-five per cent of the mothers can nurse their babies altogether, or partially, for at least six months. Some mothers have better and richer milk than others but on the whole, it is good and we have come to discard such a thing as poor breast milk.

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Tulsa, Oklahoma, May 15-17, 1923.

Milk analysis gives us no important information and need not be made except in rare cases, but the weight curve is the best indicator of the quality and quantity of breast milk. If the babe does not gain as much as six ounces per week on the breast, we are justified in additional feeding after each breast feeding with some form of modified milk. Sixty per cent of deaths in the first year of life are due to nutritional disturbances and improper feeding. An exception to the rule of breast feeding is indicated when the mother has some incurable disease, exposing the baby to the same diseases, as in active pulmonary tuberculosis or of other diseases of the mother, causing rapid progressive wasting.

Sepsis is the most common infection of the newborn; pyelitis, meningitis, tetanus and pneumonia sometimes occur; and the acute contagious diseases are more rare at this time of life.

The causes of death each year after the first are different. So it will be well to take them up with the mortality at the various ages. Intestinal disturbances are still the cause of over one-fourth of deaths during the second year. This is due to the variety of food that the child is eating at this time, some of which should not be given and some that is not properly prepared, resulting in acute alimentary intoxication or an infectious type of diarrhea. The blood of these infants is concentrated by water loss and the failure of renal function is the result of excessive water loss from the body by the way of the bowels. This waste is sometimes so great that recovery is impossible as sufficient water cannot be given by mouth to combat the severe degree of anhydremia caused by vomiting, diarrhea and evaporation, resulting from increased protein metabolism. Normal saline or "Ringer's Solution" by the way of the peritoneal cavity, is advised and many cases of diarrhea could be saved if this method of introducing fluids were used before anhydremia developed.

Next in importance are the respiratory diseases which are responsible for 26.4 per cent of deaths during the second year of life. By educating the mother in the proper ventilation of the sleeping room and the home, and in keeping her babes from public places, mortality can be greatly reduced. The child is free from tuberculosis at birth and infection is not likely to take place until about the third year, unless there is an open case in the same house. If this is the condition, infection is likely to follow in the form of T. B. meningitis, which is acute

and rapidly fatal. During the first three years of life, the child should be guarded against contact with tuberculosis because of the great danger of immediate development at that age.

The epidemic diseases with diphtheria in the lead, are responsible for one-fourth of the deaths during the third year of life and for one-third during the fourth year, with diphtheria then causing one-sixth of the deaths. In the fifth year, we find the mortality rate due to these diseases greatly on the decline and the appearance of their sequelae, acute rheumatism and acute endocarditis, organic diseases of the heart, acute nephritis and Bright's disease. Heart disease occurs in one in every fifty of our population and the causes are infectious diseases, intoxications and improper methods of living.

The death rate of whooping cough is second to diphtheria and the younger the child, the higher the mortality. As yet, the prophylaxis is not fully established, though some claim very good results from fresh vaccine for a prophylactic measure as well as a curative. The same results are not obtained in all cases, but I am sure that you get results in some and feel that it should be used in connection with the ether treatment. The ether, about 1 c.c. for a child two years old, is injected intra-muscularly in the gluteal region and may be given every third day. Very good results from this treatment are reported and it should be used with children having severe paroxysms.

Measles. 10,442 deaths are due to this diseases each year and at this time we have no prophylactic serum for general use though prophylactic injections of convalescents' serum is being used for institutional work with very good results. It should be used as soon as possible after the beginning of the incubation period and it should also be used in hospitals to control epidemics and to protect patients who, by mistake, have been sent to the ward where measles is being treated. In certain cases in private work, the age or weakened condition of the child exposed to the infection, may make this treatment advisable. No conclusive results have been obtained by the workers with this serum when it has been used for therapeutic purposes during the course of the disease. The weak, sickly and tubercular children should always be shielded and isolation should be in the prodromal stage as it is too late when the eruption appears. Disinfection of the rooms is superfluous as a room occupied by a

measles patient, with no danger, may be turned over to a person who has not had the disease.

The death rate for scarlet fever for all ages is 3.124 and it occurs most frequently in children between the ages of 3 and 6 years, but is not uncommon up to the twentieth and thirtieth years. Prophylaxis depends upon the strict isolation of the patient until complete desquamation or all the complications are cured and a thorough disinfection of room and contents is made. Convalescent serum has been used in the early toxic cases with very encouraging results. Serum of fresh whole blood is obtained from patients who are two or three weeks convalescent. At the present time we have no serum for general use for measles or scarlet fever and to reduce the prevalence of these diseases, we must assist in educating the public in the real nature of disease transmission, in the prompt report to the health authorities and in efficient isolation.

The death rate for diphtheria for all ages is 12.442 and under five years is 7.442. In the prevention of diphtheria we have two of the most efficient measures known at the present time to the medical profession. The Schick test determines liability to the disease and toxin-antitoxin gives a protection to those who are liable.

Studies which were carried on by the New York Department of Health show that susceptibility to diphtheria is present in about the following proportions:

Under three months.....	15 per cent
Three to six months.....	30 per cent
Six months to one year.....	60 per cent
One to two years.....	70 per cent
Two to three years.....	60 per cent
Three to five years.....	40 per cent
Five to ten years.....	30 per cent
Ten to twenty years.....	20 per cent
Over twenty years.....	12 per cent

We see that children under six years are more susceptible. This is the pre-school

age and includes children from six months up to school age. But at this time it is advised that the Schick should not be done and that the children should be given the active immunization with toxin-antitoxin which gives immunity of 97 per cent and lasts for years and perhaps for life.

We, as physicians, should realize the responsibility and opportunity given us each day to help educate the public to obviate these infectious diseases which kill so many of our little children or leave them with some organic disease which impairs them in later life for usefulness to themselves and to the community in which they live.

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### CONGENITAL CLUB FOOT\*

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The cause of this classical congenital deformity has been subject to much controversy among physicians all through the ages and is still an unsettled question. It would be impossible in the time allotted to go into detail on this subject, so that, since this paper is presented before the section on pediatrics and obstetrics, it seems expedient to limit discussion to the interesting phases of etiology and stress only the main points in the treatment of the condition.

Statistics usually quoted are those obtained from the records of large hospitals, but I thought that it might be of some interest to investigate the experience of the man in general practice regarding this deformity. Questionnaires were sent to fifty Oklahoma physicians known to have been in general practice for a great number of years, and out of the information rendered by twenty-three who replied, the following statistics were tabulated.

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\*Read before the Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

Physician	Years in Practice	Cases Delivered	Double	Other Deformities Present	Received Treatment	Known Cured	Relapsed	Cause
Dr. Davis Canute	27	None						
Dr. Phillips Picher	33	2	1	None	Not Known			Not Exp.
Dr. Collins Panama	25	2	2	None	1st Year	1	1	
Dr. Holbrook Perkins	22 (1300 cases)	4	None	None	2nd Year	2		
Dr. Hatfield Mulhall	36	None						
Dr. Lynde Okarche	42	None						
Dr. Barnett Hitchcock	26	3	2	1	1-12 mos.	1		Deficient liquor am.
Dr. Wolff Waukomis	25	1	1	None	6 mos.	1		
Dr. Stone Edmond	25	None						
Dr. Haywood Wagoner	42	None						
Dr. Childers Mulhall	32	3	1	1 still born	1	1		
Dr. Settle Wynnewood	28	1		1 still born	None			
Dr. Sharp Orlando	19	5	4	None	early	4	1	
Dr. Beach Glencoe	33	2	None	None	splints	2		
Dr. Connor Coalgate	41	6	2	3	2 mos.	3	3	Maternal Impression
Dr. Johnson Pauls Valley	18	2	1	None	Not known			Puerp. Eclampsia
Dr. Buchanan Watonga	15	2	None		Died			
Dr. Strother Nowata	55	1	None		Early			
Dr. Lehw Pawnee	25	8	None		No Record			
Dr. Workman Woodward	43 (2500 cases)	3	2	1	No Record			
Dr. Worthington Miami	21	6	2	4	Early	2		Deficient Liquor am.
Dr. Gohen Lehigh	31	None						
Dr. Voyees Gotebo	40	1			3rd year			
TOTAL		52	18	11		17		

In summing up this information, we find that eighteen physicians in practice over twenty-five years have delivered a total of only thirty-three cases, an average of about two cases each during this period.



Case 1 Fig. 1  
H. B. Age 3 weeks before treatment.

Three who have practiced forty years or more have delivered no cases. Six have delivered none in thirty years. One doctor delivered only one case in fifty-five years and states that he has always had a big practice.

It will be noticed that only eighteen of the total fifty-two cases are known to have received treatment.

Other deformities were present in one-fifth of the cases, monstrosity and still births being complications most frequently mentioned. No particular cause seems to have impressed itself upon any physician.

ETIOLOGY

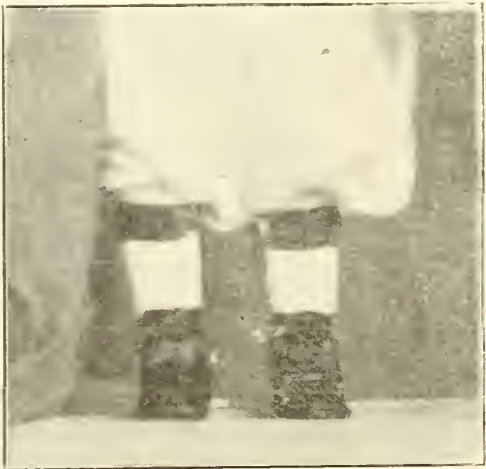
Various theories which have been advanced to explain the cause of congenital club-foot are:

1. That it is due to an external force in

utero, a so-called mechanical theory.

2. That it is an intrinsic affair, i. e., an error in the embryonic rudiment.

3. That it is an affectation of the mus-



Case 1 Fig. 2  
Age 14 mos. showing braces applied to prevent relapse.

cles or nerves through the central nervous system.

4. That it is due to a hereditary trait.

Frankel (Zeit. fur Orth. Chir. 1913. Bd. XXXII) puts the etiology in a little different manner. He has frequently found a history of an unusual difference in size between mother and father, of a placenta previa, tumors, previous operations for retrofixation, unusual position at birth and twisting of the cord.

With these theories in mind, special data was obtained in twenty consecutive personal cases and may be tabulated as follows:

			Single Double	Father's Weight	Mother's Weight	Age of Mother	Age of Father	Hgt. of Mother	Hgt. of Father	No. of Children
1.	S. T.	m	s	170	220	20	37	5-7	5-8	1st.
2.	S. N.	m	s	150	90	25	28	5	5-8	1st.
3.	B. U.	m	d	150	126	27	27	5-6	6	1st.
4.	G. O.	m	d	180	138	28	27	5-6	5-11	1st.
5.	G. O.	m	s	180	138	28	27	5-6	5-11	2nd.
6.	W. E.	m	s	160	135	28	32	5-5	5-8	3rd.
7.	N. E.	m	s	148	128	27	29	5-4	5-10	4th.
8.	B. U.	m	s	140	120	31	42	5-4	5-10	4th.
9.	A. D.	m	s	190	135	32	35	5-6	5-11	1st.
10.	M. C.	m	s	175	145	34	35	5-7	6-2	1st.
11.	A. C.	m	s		115	35		5-3		1st.
12.	W. I.	m	s	140	120	38	40	5-3	5-2	1st.
13.	H. O.	m	d	175	120	30	31	5-2	5-9	1st.
14.	A. S.	m	s	140	122	31	35	5-4	5-6	5th.
15.	B. U.	f	d	185	113	34	35	5-5	5-10	2nd.
16.	T. H.	m	d	140	123	22	25	5-3	5-8	1st.
17.	M. O.	m	s	135	145	24	26	5-4	5-6	3rd.
18.	M. U.	m	s	160	130	46	54	5-7	5-11	6th.
19.	C. O.	m	s	170	110	20	23	5-4	6	1st.
20.	C. R.	m	s	140	125	34	38	5-4	5-7	8th.

These statistics, while not sufficiently great to draw any definite conclusions, bring out some interesting facts which are worthy of study.

1. It is a striking fact that eleven out of the twenty cases were the first born and ten of these were the only child.

2. Where the number of cases are multiple to one mother they are consecutive, deformity occurring first in the first child. In case number 17 M. O. the first three



Case 1 Fig. 3

H. B. Age 2½ yrs. Note complete correction.

children had an equino-varus deformity of one foot, but not the same foot each time. The fourth child of the same mother is normal. Case number 4 and 5, G. O. were first and second children, one being double, the other single.

3. Another striking feature is that all except one are boys. Fifteen are single and five double.

4. In only one case was there a history



Case 2 Fig. 1

J. K. Age 16 days before treatment.

of hereditary tendency. The same deformity occurred in a cousin of the case number 14 A. S.

5. The height and weight is only aver-

age in all cases. There was no other malformation present in these cases.

It is difficult to explain just why so many cases are the first born. Perhaps this is indicative of the extrinsic or mechanical theory. This theory has had the greater share of advocates since the time of Hippocrates. It is said that Ambrose Pare supported this view and described it as due to the mother sitting too much with her legs crossed. Constriction by amniotic bands, deficient liquor amnii, pressure of the uterine wall on fetus in abnormal position, action of the umbilical cord, and retarded rotation of attitude of foetus during gestation subjecting feet to pressure are the various forms of external force which may cause a mechanical change in the foot.



Case 2 Fig. 2

J. K. Age 2 mos. Showing early over-correction in plaster.

It is reasonable to believe in this theory because we know that deformity of the foot may be acquired in later life, due to changes of mechanical nature.

The mechanical theory, however, does not well explain all cases. Club-feet have been found in extra-uterine foetation and in a case of ruptured tubal gestation. The table of statistics obtained from physicians shows that other deformities occurred in thirteen out of the fifty-one cases. It is well known that club-hands, cleft palate and hare-lip are frequently associated with club-foot. In these cases we may ask if mechanical constriction is a coincidence, or is the deformity of the foot due to a developmental error of the primitive ray.

We also find club-foot in many cases of spina bifida, hydrocephalus, and ana-cephalus. Again we ask, in these cases, is it

due entirely to the disturbance in the nervous element or is it a mere coincidence?

In diseases of musculo-nervous origin, such as spastic paralysis, and the muscular dystrophies, we have seen the feet gradually acquire the equino-varus deformity. It is difficult in these cases to say how much influence the nervous disturbance has. A more clearly mechanical demonstration is seen in the infantile paralysis type of club-foot.

### PATHOLOGY

It has been emphasized many times by various authors that one who treats club-



Case 2, Fig. 3

J. K. Age 5 mos. shows over-correction complete. The result of early treatment.

foot should be thoroughly acquainted with the pathology. It will be sufficient here to mention only the main points in the pathological structure.

1. The varus deformity is due to displacement of the scaphoid and cuboid inwards at the mid-tarsal joint with a rotation of the os calcis which brings its anterior extremity downwards and inwards.

2. The equinus is due to plantar flexion of the ankle joint and a displacement of the scaphoid downwards in its relaxation to the astragalus.

### TREATMENT

The slogan in the treatment of congenital club-feet should be "Treat it early and don't quit too soon".

There seems to be a general impression that treatment cannot be undertaken until the child is several months old.

If we abide by Wolff's law this opinion



Case 3 Fig. 1

H. G. Age 4 before operation.

is incorrect. Julius Wolff gave us a law, the substance of which briefly stated is; that form is the outcome of function; that is, through a continuous or sufficiently frequent performance of function in a given



Case 3 Fig. 2

T. G. Age 5, brother of H. G. Before operation. These feet were corrected by tenotomy at age 3 mos., but neglect of after care caused relapse.

position a corresponding structural change takes place.

On this theory one is assured then that

if correction is begun early and foot fixed for a sufficient length of time in the over-corrected position and made to function in this position, a complete cure will be effected.

Therefore, the time to begin treatment of this condition is the **day the child is born**. The foot is so pliable at birth that club-foot is often overlooked for the first two or three days. Development of strength in the new born is rapid and the shortened group of muscles soon overcomes the opposing group and thus the tissues are fixed in permanent deformity.

The first thing to do is to manipulate the foot or feet three times daily forcing them



Case 3 Fig. 3  
H. G. and T. G. One year later.

toward the over-correct position. Side splints, well padded, may be used to advantage in retaining the foot in position.

Plaster may be applied as early as the first week, if sterilized white flannel and specially prepared two in. crinoline plaster bandages are used. But in general practice, plaster casts applied this early are apt to cause trouble unless the operator is especially prepared for such work.

Gradual correction by means of manipulation and successive plaster casts without anaesthesia may be undertaken any time up to six months.

If treatment is not begun until the sixth month, it is best to do the correction in from two to three sittings and employ an anaesthetic each time, maintaining the correction in plaster between operations.

In case the patient is from a great distance or the parents refuse to subject the child to several anaesthesias, then tenotomy and full over-correction at one sitting may be done. While in my experience tenotomy has produced no damage, yet it seems reasonable to believe that a stronger foot and better function will be the result if tissues are left intact and gradually forced into correction.

Whatever method employed, in the early treatment, over-correction should be maintained until two or three months after the child is walking. By over-correction, I mean that the dorsum of the foot almost touches the tibia. If the feet are not in over-correction when the child begins to walk, braces should not be relied upon to obtain further correction. Manipulation and tenotomy under ether is the only sure way of gaining over-correction.

Application of proper braces is a very important feature, however, but their purpose is to prevent varus and equinus from re-occurring, and not to correct it. In some cases which have responded quickly in the early months, braces may not be necessary. Correction can be maintained by adhesive plaster until the child learns to walk then the sole of the shoes may be raised one-half inch higher on the outer border.

In conclusion let me emphasize three points.

1. Begin treatment early.
2. Don't quit until foot is fully over-corrected.
3. Maintain correction until it is certain deformity has lost its tendency to recur.

#### PROCEEDINGS OF THE UNIVERSITY HOSPITAL CLINICAL SOCIETY

Oklahoma City, Okla.

**Dr. E. S. Ferguson:** A Case of Melanoblastoma of the Conjunctiva and Cervical Gland.

Patient is a male 63 years old, whose occupation is a farmer. His past history and family history are negative.

He has had a hard, firm, round tumor mass, not painful or tender, of three years duration, about the size of a walnut, below the angle of the left mandible.

Patient entered hospital from Dispensary 2-27-23 with a chief complaint of tumor growth on lower left conjunctiva. The present illness started about two years ago with a small growth on the left lower con-

junctiva. This was removed but started to grow again almost immediately. It was again removed about six months later. It began to grow again and became steadily larger. However, it caused patient no pain or discomfort until about three weeks ago, when he said that his afflicted eye felt as if it had a foreign body of some kind in it. The patient experienced a sense of discomfort and irritation about the eye accompanied by a serous lachrymal discharge. There were no visual disturbances.

In addition to the actual pathology found patient presented some neuropathic, such as irritability, increased nervousness, and forgetfulness. He thinks his arm is paralyzed, and that everyone is trying to deceive him. He is very slow in answering questions.

Urinalysis is negative. W. B. C. 7,950; 69 polys; 26 small lymphocytes; and a one plus Wassermann with a cholestrin antigen.

Patient was operated 2-28-23 with a tentative diagnosis of Melanotic Sarcoma of the left lower conjunctiva. Incision was made completely around the tumor in the conjunctiva and the tumor dissected loose with scissors. Growth was not densely attached. There was no scleral involvement, and very little bleeding. Operation was done under local anaesthetic. A dark tumor mass was found on the lower left conjunctiva, apparently freely supplied with blood vessels, about one-eighth of an inch in diameter and a quarter of an inch in length, bean or cylinder shaped. The tissue report on this growth is Glioblastoma, (by Dr. Turley), which belongs to the carcinoma series. Dr. Roland saw patient in consultation and advised the use of radium post-operative followed by X-ray, which procedure was followed out.

A gland before described was removed from the region of the lower left mandible 3-7-23. This was sent to the tissue laboratory and a similar report returned as on that from the eye, with the suggestion that this was probably a metastasis from the eye.

Patient was discharged in good general condition after an uneventful post-operative history.

**Dr. Lain:** This patient was seen by myself after a diagnosis had been fully completed. Doctor Roland informed me that he plainly told the consultants that the case appeared as hopeless, only for the reason that the patient urged that something be done he advised radio-therapy with a faint

hope that at least the patient's life might be prolonged.

Our experience with radio-therapy treatment in melanomas has not been satisfactory except in the epithelial or carcinoma type. Personally, in all my experience, I have never known a well developed case of melano-sarcoma to recover. Only three or four cases of the melano epithelioma which I can now recall have made complete recovery. Each of these cases were diagnosed and treated in their earliest stage of development.

One, a case of melano in the center of the back had previously been operated upon with a prompt recurrence. This case was treated with heavy radium and x-ray and has now been well for more than three years.

Another, a case of melano epithelioma upon the scalp which had also been operated upon with a recurrence, has been treated at various times with radium during the past thirty months. This case is also apparently well at the present time excepting for a small ulcer which was located at a point where sloughing took place.

Another was a former professor in our University with a melano upon the leg which was removed surgically by myself and immediately followed by x-ray treatments. I heard from this man after three years and he had at that time no recurrence.

In my opinion very few, if any, melano sarcomas are cured by any method of treatment. In melanomas of the epithelial type, however, if surgery or radio-therapy either or both are used in the early stages the prognosis is not quite so bad.

**Dr. L. A. Turley:** Melanotic tumors, whether they arise from the choroid coat or are primarily in the conjunctiva or occur elsewhere in the body have a common histogenic origin. The embryologists have not yet made it plain or agreed as to whether the melano-genic cells are of ectodermal or mesodermal origin and before we definitely classify this tumor it is necessary for us to wait for the decision of the embryologists on this point. The more recent classification of tumors describe a melanotic sarcoma and a melano-epithelioma and it is a fact that in some cases these tumors are composed of small cells and in general have the characteristics of growth that are more typical of sarcoma than carcinoma or other epithelial tumors in that they have scant stroma of their own and are usually vascular and unless traumatized usually metastasize by the blood stream, but in other

cases the cells are large, polyhedral in shape, tend to grow in masses and otherwise more closely resemble epithelial tumors in growth. But we can not justify ourselves by calling one case an epithelial tumor and another of connective tissue origin solely on manner of growth and since so far as we know the melano-genic cells all have a common embryological origin they are always either epithelial tumors and always sarcomas.

In the case in hand it would be quite possible for a tumor to grow through the sclerotic coat to the surface, attached only to this origin by a microscopic thread or column of tissue as well as to be primary in the conjunctiva. The fact that the present tumor is the second recurrence would seem to indicate that such an origin and such a history were quite possible and more than probable in this particular case. Tumors sometimes do very peculiar things and quite frequently grow into and through very dense tissue rather than on the free surface where growth would be more easy, and we frequently have tumors burrowing into dense tissue even those that originated in a position which gave them ample opportunity to grow on the free surface with little obstruction. The further fact as cited by Dr. Ferguson that the enlargement in the neck was apparently older because larger does not militate against the fact of the eye being the primary site. I know of a case of one of these tumors arising from the eye and later it had destroyed the entire eye-ball but it did not budge beyond the lids and except for blindness attracted no attention to the eye and yet there were thousands of metastases in the liver, some as large as a baseball. I am not saying, however, that this tumor did arise in the eye, but that such is or is not the origin can be proven only by examination of the eye-ball. It is undoubtedly true that the hematoma of the breast was also one of these tumors and may well have been the primary one in this case since these tumors metastasize by the blood stream it would be quite possible for the metastasis to occur in the eye, although there are so many other more probable possibilities for metastases elsewhere, a fact which further points to the eye as the primary site.

To sum up, it is far better to call these tumors melano-blastoma because they arise from the melano-genic cells and regardless of the origin we can be quite sure that we are right. Furthermore, it must be remembered that they always arise on the surface of the body or in the eye and al-

though one case is composed of small cells and another one of larger cells, we can not make the distinction of sarcoma or epithelioma. They are always one or the other, not both. These tumors usually metastasize by the blood stream unless traumatized in which case they may go by the lymphatics. They are among our most malignant tumors and one in the face of which modern science is most helpless.

**Dr. Ferguson** (closing the discussion):

Since there were visual signs of metastasis in at least two places, and a probability of another in the brain we felt that the prognosis was hopeless in this case, and so informed the patient.

Since there is considerable pigment in the conjunctiva, and since the base of the tumor was broad, and freely moveable over the sclera and the eye subjectively, and objectively by ophthalmoscope normal, it seems to me more probable that it arose primarily in the conjunctiva. The metastasis may have reached the lymph gland at the angle of the jaw by one of two methods: By direct extension down the lymph channel which sends one branch to the angle of jaw (Cunningham's Anatomy) or, by extension through the lymph channels accompanying the long ciliary arteries back through the ophthalmic artery to the plexus accompanying the internal carotid artery and then out to the angle of the jaw from the anterior cervical plexus. That to the breast and brain probably metastasized by blood stream.

The prognosis in these cases is always desperate, though I have had scant few get well.

**Dr. John F. Kuhn:** Presentation of a Series of Cases of Empyema.

I have very little that is new to offer to you this evening. But inasmuch as the question was raised at our last meeting as to the relative merits of the two methods of operating for the treatment of empyema. I thought it would be well to show some cases to illustrate both methods and give the reasons for the choice in each case.

The three cases were all post pneumonal; all developed in the hospital, and all were recognized and diagnosed early by the medical staff.

The first patient, G. hospital No. 19356, had made excellent progress in recovery from his pneumonia. He had reached the stage of resolution, had passed the crisis and was for a day apparently on the high

road to recovery when he suddenly developed more pain, his temperature rose rapidly and the physical findings of a pleuritis were found. Effusion into the sac appeared early, and by the fourth day he gave unmistakable evidence of a purulent development. Withdrawal of a small amount of fluid for diagnosis showed pus, and culture gave pure pneumococci. The patient's general condition during this development was unusually good. He was never extremely septic, and he was not physically greatly depressed. His pulse was of regular quality and fair volume. Mentally, he was bright and he was not suffering much pain, nor did he have a serious racking cough. Here we had almost positive evidence of a patient with enough immunizing bodies to resist the extreme depressing influence of this new invasion. Ample time had elapsed, during the usual steps in perfecting the diagnosis, for the development of a good wall of plastic exudate, and yet no time was wasted during which the patient's newly acquired partial immunity might be broken. This seemed to be a case suitable for rib resection, which, by the way, I believe to be the operation of choice if the patient's condition permits the step. Accordingly, this operation was performed. A fenestrated drainage tube with one-fourth inch lumen was inserted about three and one-half inches pointing upwards in the axillary line—free drainage resulted. After four weeks the pus became thick and "lumpy," (indicating probably the disintegration of the plastic exudate). Upon the appearance of this type of pus the cavity was irrigated with a warm four per cent solution of sodium biborate (borax). This irrigation is carried out without force—simply allowing the solution to flow in, and after filling the cavity, allowing it to flow out again. This strong alkaline solution has the property of quickly dissolving the thickening pus—thinning it almost instantly, thus hastening the drainage. After a week of irrigation, the pus cavity had become so small that the tube was removed. This patient has had no fever or other untoward symptom for two weeks—and is discharged cured five weeks after operation.

Case No. 2. L, hospital No. 19609. This was a case of post influenzal pneumonia, with consolidation of practically the whole right lung. In addition to his pneumonia he had serious mental complications. There was no sharp line of demarcation between the pneumonia and the development of the empyema—the symptoms of pneumonia gradually merging into the final definite

symptoms of empyema, and during all this time the patient's condition extremely critical. I counseled delay of forty-eight hours to allow some formation of plastic exudate. This, because I believe the traumatizing of the tissue will be less likely to cause rapid absorption of toxins, and also, because I feel that a system unable to aid this much in its own protection is not likely to be able to defend itself against the least bit of added trauma. This patient was moved to the operating room (an unnecessary risk, I believe) and under local anaesthetic a medium sized trocar inserted, and through this a No. 18 F. catheter passed about four inches into the pleural sac. There was considerable shock in this instance—due, I thought, to some collapse of lung when the trocar was inserted. There was very little drainage at the time of operation, but by the following morning it was flowing freely and continued to be very free for three weeks when it became thickened and "lumpy." At this time irrigation with the sodium biborate solution was begun and continued at irregular intervals as was needed to thin the pus and permit free drainage. This patient had an extremely stormy convalescence, due to his mental state, but as regards the empyema he has made very rapid progress. He has had no fever for six or eight days. The cavity is reduced to practically nil, and the discharge has stopped. The tube is removed fifty-two days after operation. This patient will be kept under daily observation for some time yet, although he seems at this time to be entirely recovered.

Case No. 3, Baby P. hospital No. 19756. This little fellow, age fifteen months was admitted to the children's ward with a tremendous pneumonia—the whole right lung being consolidated. Temperature 105 degrees. He was critically ill during the period of his pneumonia, but on the ninth day after admission his temperature fell to around 100 degrees, and he appeared to enter the stage of resolution. Physical findings, however, were not such as to confirm this. His temperature never reached normal. The percussion note was flat—no breath sounds. A diagnosis of pleural abscess was made, and on January 23, 1923—twelve days after admission, the cavity was aspirated and 140 C.C. of pus withdrawn. He was markedly benefitted for several days but made no real progress toward recovery. He was transferred to my service and I saw him first January 30, 1923. It was clear that permanent drainage would have to be established soon—the baby presenting the classical picture of a chest full of fluid. I waited two days for permission to

operate and on February 1, 1923, under local anaesthetic, inserted a trocar in the 6th interspace—mid axillary line right—pus spurting our fully three feet as soon as the cavity was penetrated. A No. 14 F. catheter was inserted and no further attention given except to keep large sterile absorbent pads in place. He drained very freely constantly, but made very little progress for the first ten days—partly because of an otitis media, and I believe also, a small area of pneumonia in the left lung. He continued to drain freely during this time and about the 12th day after the tube was first inserted his temperature reached normal. From this day onward he made rapid progress toward recovery—the drainage diminishing rapidly and the general symptoms clearing up rapidly. On the 21st day while the nurse was redressing him the tube slipped out and the interne was unable to replace it. Inasmuch as the drainage had almost ceased and the patient was making such excellent progress, I decided to leave the tube out and observe the effect. On the 23rd, however, two days later, it became apparent that the cavity was again filling with pus, so under one-half per cent procaine the tube was again inserted through the trocar. This drainage was continued then until final dismissal. Occasional irrigation with a solution of sodium borate (whenever the pus became thick) was instituted. The progress after the second drainage was much slower, some pus discharge continuing. The tube was removed April 22, 1923, and not replaced. Slight pus continued to drain from the track for several days—the amount diminishing from day to day until it ceased entirely on May 6, 1923. He was continuing to show a slight daily temperature up to 99 degrees, but was making excellent general progress. Chest finding gradually returning to normal. We wished to keep him under further observation but his mother insisted upon taking him home, so he was dismissed on May 8, 1923, having been under treatment since February, 1923—ninety-eight days.

I believe this case was greatly prolonged because of the failure to reinsert the drainage tube immediately when it first slipped out. My excuse for the delay of two days being that the patient had been making such excellent progress that I hoped we were through with the drainage.

#### Dr. A. D. Young: Muscular Dystrophies:

The muscular dystrophies, while constituting a very consistent group, may not clinically resemble one another at different periods of their progress. They usually

begin early in life and may be present in several members of the same family. The disease may affect practically all the muscles of the body or may be limited to a group of muscles or may damage only parts of single muscles and even in the midst of an extensive atrophy, some fibers may be hypertrophied. The disease affects certain muscles more frequently than others, as for instance, the pectorals and serratus magnus. As the disease advances the reflexes gradually disappear, the muscles become more and more atrophied and finally contractures develop. There are no sensory symptoms. The bones participate in the atrophic process. The muscles are pale, the fibers lose their nuclei, new connective tissue replaces the atrophic muscle fibers and in some cases there are deposits of fat giving the appearance of hypertrophy. The varieties are:

- (1) Pseudo hyper-trophic (Duchene).
- (2) Juvenile (Erbs).
- (3) Facio Scapulo-humeral.
- (4) Atrophia myotonia congenital (Apenheim).
- (5) Distal (Gowers).
- (6) Mixed and transitional.

There is another group that is generally known as progressive muscular atrophy that begins later in life, perhaps more often in the third decade. In contemplating this set of nervous disorders one should bear in mind that the motor and trophic neurons are divided into three parts, the anterior horn cells, the motor nerve and the muscle plate. It has always been taught that there are two ways in which this group begins, one by primary degeneration of the anterior horn cells and the other by primary degeneration of the motor nerve. However, if the neuron theory is correct and the anterior horn cells are responsible for the integrity of the nerve fibers, it must necessarily follow, it seems to me, that all these atrophies must be due primarily to degeneration of the anterior horn cells.

There is also a variety affecting the nuclei in the brain, called mesencephalic, causing gradual degeneration of the cranial nerves with consequent ophthalmoplegia and a bulbar type affecting the muscles of deglutition, phonation and even the respiration and heart.

The cause is either a congenital defect in the nervous system causing an early death of the cells or there is present a chronic infection producing the same result. I do not know which theory is correct.

Some cases seem to be a chronic poliomyelitis, at least clinically.

### Presentation of Cases

Case 1. Began with atrophy of shoulder girdle gradually involving arms. This boy, who is a patient of Dr. W. K. West, is wearing a brace to assist in supporting shoulders.

Case 2. A boy 15 years of age shown through kindness of Dr. Leroy Long. Atrophy began in legs and now, as you see, involves all the muscles of the arms, legs and trunks. He cannot move the legs at all and the arms very little.

### Dr. R. M. Howard: Embryonal Cysts and Fistulae of the Neck:

Embryonal cysts and fistulae of the neck may be either of two types, i. e.; branchial cysts and fistulae, or thyroglossal cysts and fistulae, each differing from the other very widely in its origin, but having in common a characteristic epithelial lining which causes persistence until it is entirely removed.

The branchial type originates from imperfect closure of branchial clefts in embryonal life which leave fistulae, or cysts lined by mucous secreting epithelium. These may not cause trouble until by irritation, infection or closure of a fistula that has drained the tract efficiently before that time. This may not take place until adult life when a cyst or an abscess will appear that, when drained, as often is the case, will leave an external fistulae which will persist.

Normally the upper cleft is the only one that remains open, forming, as it does, the external ear, the eustachian tube and the auditory canal. Any one of the three lower clefts, persisting in part or whole, results in the above described condition. Minute openings on the skin of the neck along the anterior border of the sterno-mastoid muscle are often seen. These secrete small quantities of mucous for an indefinite time but are a potential source of trouble. Undoubtedly similar internal openings are present. Cysts occur that apparently have no external or internal openings.

The thyroglossal cysts and fistulae resemble the branchial type but are of different fetal origin, being connected embryologically with the thyroid gland. Embryologists have shown that the foramen caecum on the back of the tongue is the remains of an obliterated canal which was left in the descent of the thyroid from this region,

leaving a duct which naturally closes. Unobliterated portions of this duct lined with epithelium form thyroglossal cysts or fistulae.

These congenital conditions do not always cause symptoms early in life. Once having caused trouble they remain as indurated tracks leading inward, being situated between the anterior borders of the sterno-mastoid muscles. The distinguishing features are: First, that the branchial type are lateral while the thyroglossal are mid-line affairs, and second, the branchial tracks lead upward, outward and posteriorly entering the pharynx while the thyroglossal pass upward and backward in the midline to the base of the tongue.

In the treatment, the epithelial track must be removed in its entirety. This is not always easy. Cysts and dermoids of the same origin must be classed with the fistulae and require the same treatment.

In operating the branchial fistulae, great difficulties are encountered, the epithelial lined track being so closely adherent to the great vessels and nerves as to make the proceeding hazardous. From pharyngeal or tonsillar region these tracks cross in their downward course the pharyngeal and thyroglossal nerves, and pass under the stylo-pharyngeus and styloglossus muscles emerging alongside the great vessels, passing between the external and internal carotids and crosses the digastric muscle to the hyoid region. They then find exit between the sterno-mastoid, sometimes low in the neck.

The thyro-glossal fistulae are much easier and certain of removal. They can be followed up on the anterior surface of the trachea in the midline to the hyoid bone. Most usually they pass through the hyoid bone and a piece of it must be excised. From here they pass upward and backward at an angle of 45 degrees to the base of the tongue. By following the direction and by removing a quarter of an inch of tissue around the track, little difficulty is found in removing it entirely. The opening in the tongue can be sutured and with drainage the wound will soon heal.

I have operated four branchial fistulae, and three thyroglossal fistulae without a failure. In one of the thyroglossal fistulae the second operation was necessary due to leaving some epithelial tissue of the track low in the neck.

The case I have to show you is one that I operated ten days ago. A young man whose trouble first became noticeable in

1918 when a swelling appeared on the front of his neck. This was incised in the midline and drained almost continuously until August, 1922, when he was operated at Houston, Texas. Wound healed for one month, then had to be operated again; drained for awhile, closed and drained again. When he came to the hospital, March 3, 1923, he had a swelling in midline of neck very low, beneath scar of old operation. Dr. Clymer saw him, incised the wound and injected bismuth paste for the purpose of obtaining an x-ray picture. This did not prove very satisfactory, but wound closed. He returned to the hospital on April 3, 1923, with a fluctuating mass in midline of neck extending upward. He complained of pain in region below right ear.

A diagnosis of congenital cyst of neck, probably thyroglossal in origin, was made as indicated by its midline position.

On April 7, 1922, through a transverse incision at the middle of the neck above the old scar, I dissected out the cyst from below and followed it upward to the hyoid bone, thence outward and upward along the carotids, thence inward to the region of the tonsil. Its direction compels us to change our diagnosis to that of branchial cyst. A drain was left in place for forty-eight hours. The wound is healing and I expect him to be cured. The only possibility of failure would be from some portion of the epithelial wall having been detached low in the neck where much scar tissue was encountered.

#### **Discussion: Dr. Horace Reed.**

All that Dr. Howard says is true. I think that with one exception, every case I have seen has been operated on for something besides the true condition. The majority have been operated for tuberculous abscesses—because they did not get well. One case I operated myself, last I had, I was in doubt as to what I was dealing with. The man came in with a knot on the side of his neck, which was discharging. He refused to go to hospital and have operation, and induced me to operate under local anaesthetic in the office. To my chagrin, he came back in three or four weeks and had a little moisture there. He would not submit to operation when I told him the nature of the trouble.

There is an additional procedure in diagnosis that can be used. To determine whether one is dealing with a congenital cyst or a sinus of some other formation, one needs only to make a microscopic examination of the secretion. If epithelial

cells are found it is conclusive evidence that the trouble had its origin in a structure lined with mucous membrane. Sinuses resulting from diseased bone, cartilage or thyroid gland would discharge no epithelial cells.

One other point in diagnosis, namely, to determine whether or not the tract enters into pharynx, inject material of some coloring matter and watch at the same time the pharynx and the point of exit of the coloring matter will determine whether it is a thyroglossal or branchial cyst. At operation I do use a probe. I insert the probe very gently, as large a one as will go, and try to get it passed on into the throat and dissect out tissue about it, because if you do not dissect out the tissue around it will have a recurrence.

**Dr. F. M. Sanger:** One thing I wish to speak of—I enjoyed Dr. Howard's paper very much. In these branchial cysts, it takes us back to our embryology, which shows us our origin in common with other vertebrates. You remember in the embryology of fish and frogs and pigs, early in their development the tail appears and in man when the embryo is only seven to eight mm. long the tail is about one-sixth the entire length of the body. And we notice in the sixth week the tail begins to disappear and by the ninth week regression of the tail is usually complete.

These branchial cysts persist from embryonic life—their regression did not occur, as it should have done. These branchial cysts are remains of one or more of the three lower pairs of the branchial (visceral) grooves, that are at first separated by the branchial arches. The external auditory meatus is formed by the upper part of the first pair of branchial grooves and the auricle is formed by its margins. The other three pairs of grooves, being depressed, form the cervical sinus and this also normally soon closes over and becomes obliterated.

But as Dr. Howard has pointed out this evening, one great annoyance in these post natal branchial cysts, is the secretion which is thrown out by their mucous membrane.

**Dr. A. D. Young:** I want to ask if fish have ears? They always say be quiet when fishing.

**Dr. F. M. Sanger:** In answer to Dr. Young's question: The fish has the mouth in the upper part of the head which head is both neural and visceral in its origin. The ear consists only of a membranous labyrinth. The bones of the skull transmit the

sound waves to the fluid within the labyrinth. The ear of the fish (the lowest of the vertebrates) has the three semicircular canals and a sacculus which contains concretions of calcium carbonate, called ear stones, or statoliths. To the fish the ear is both an organ of hearing and of equilibrium.

**Dr. T. Wails:** In some fish along the sides of the neck, just back of the semicircular canals, or organs of equilibrium, is what is called the tactile sense organ. This organ seems to have some of the functions of both the ear and the nose. If a fish is placed in one end of a trough and some highly scented piece of bait is placed in the other end the fish will immediately swim over in that direction. This tactile sense organ is also thought to be able to detect pressure waves transmitted through the water and thus function as an ear.

**Dr. J. M. Alford:** A little more than two years ago a young man came in to me who had been operated on and part of a cyst had been removed, but it reappeared. I could not get any methylene blue through it, but filled it full of paste. The patient went away and I did not hear from him for about six months. They told me the sinus had healed and has never recurred since. I think this was a thyroglossal cyst, but do not know.

**Dr. C. E. Clymer:** Will say that we injected this boy for taking X-ray and the same thing happened for a time.

**Dr. Howard** (closing the discussion): One question might be asked in the thyroglossal type. Does it do any particular harm to cut your hyoid bone? I have only had two cases in which I have done this. The procedure they are doing now after taking out the tract through the middle of the hyoid bone, is to come back and put two or three catgut sutures in drawing the sectioned ends of the hyoid bone together in the midline. No cases have been reported where any particular harm seems to have come from this.

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*Abstracts, Observations from Current Medical Literature*

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### THE TREATMENT OF AMEBIASIS

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Although any drug that affords prompt clinical relief from amebiasis deserves serious consideration, it should be clearly appreciated, in the interest of progress, that neither *Castela nicholsoni* nor emetin, as

employed at present, is an ideal agent for the eradication of *Endamoeba histolytica* infections in man. It has long since become evident, through careful examination of the stools of patients, that freedom from clinical symptoms does not constitute a biologic test for the eradication of the invading protozoa. A serious difficulty in the study of drugs detrimental to amebas has been the lack of satisfactory methods for artificial cultivation of the admittedly pathogenic species. From an experimental standpoint it is fortunate that amebiasis can be induced with more or less success in some of the common laboratory animals, notably cats. Spontaneous recovery is rarely noted.

Sellards and Leiva have come to the tentative conclusion, from their observations in treating infected animals with emetin, that recovery from amebic dysentery in man and other species results from a combined action of the natural resistance of the host and a moderate action of the drug on the amebas. The summation of these two factors is necessary for a radical cure. A lowering of either allows the disease to progress. Incidentally, also, they<sup>2</sup> have come to the conclusion that stasis is probably an important factor in determining the location of the lesions within the large bowel, in spontaneous amebic dysentery in man.—*Jour. A. M. A.*, June 30, 1923.

### INCIDENCE OF HOOKWORM DISEASE AMONG PERSONS WHO WERE CURED FIVE YEARS AGO

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Dwight L. Sisco, New York (*Journal A. M. A.*, Feb. 17, 1923), reports certain results obtained during a resurvey of an area on the island of Antigua, British West Indies, in which the measures for the relief and control of hookworm diseases were terminated five years ago. Both the treatment campaign, extending from September, 1915, to June, 1917, and the resurvey, made during April and May, 1922, were conducted under the auspices of the International Health Board of the Rockefeller Foundation. The paper is of interest because it records the results of a careful study of hookworm infection among persons whom microscopic examination had previously shown to be cured of the disease. The findings which it presents are in complete accord with observations made by Smillie under analogous circumstances in Brazil. It demonstrates certain fallacies in campaign procedure, and emphasizes the need for definite measures in order that permanent hookworm control may be attained.

"FIRST AID TO MEDICAL TERMS" is the manner of introduction to, what appears to some persons a rather baffling, vague or misconstrued matter. It is admitted at the start that we have a number among ourselves who do not know the "Why" of certain things. Watson Davis in *Hygeia* (June 1923) undertakes to tell us why certain diseases have more than one name, for instance:

"Richard Bright, one of the 'great men of Guy's,' that is Guys Hospital, London, during the first fifty years of the last century, is famous today, beyond his just dues, perhaps, because his last name is associated with a disease that is relatively common. Before the days of Bright, medical men did not realize that the kidneys as well as the heart can cause dropsy, which, since its Greek ancestor was water, means a swelling or an unnatural accumulation of watery fluid in the body. When Bright distinguished between cardiac (from the Latin for heart) dropsy and renal (from the Latin for kidney) dropsy, he won an immediate reputation to enjoy during his lifetime, and the condition has been known as Bright's Disease ever since.

"A Dublin physician, Robert James Graves, published in 1835 a description of exophthalmic goiter so admirable that the disease still goes by his name. In point of priority, however, it seems it should be Parry's disease, as in 1786 Cabel Hillier Parry wrote an account of this disease. The Germans prefer to call this disease after one of their countrymen, Basedow, who wrote a description in 1840, and the Italians claim that this disease should memorialize one of their race who described it in 1800. The most common synthetic name, exophthalmic goiter, means a swelling of the neck at the throat (goiter comes from the Latin for throat) accompanied by a sticking out of the eyes (exophthalmus) but usually prominent eyes are not always a symptom, and for this reason some do not like this name.

"If one has occasion to use the name of Dr. Percival Pott (1714-1788), one must be careful because Pott's name is associated with two medical troubles, one of which he described and the other of which he experienced. While walking down the street one day he fell and fractured the outer bone of his leg, the fibula, so-called because this Latin name means clasp. And this particular fracture has ever since been called Pott's. While Pott was in bed recovering he began writing descriptions of diseases, and among them was Pott's disease, or tuberculosis of the spine, the cause of hunchback.

"Riggs' disease, although it was first described in the eighteenth century, is named for the American dentist who in 1876 introduced the modern heroic treatment of scraping the teeth to the roots. Its scientific name is pyorrhoia alveolaris, which, when translated, is pus running jaw.

"As late as 1910 a fever appeared in New York that was named after Nathan E. Brill who discovered it, but now it is recognized that Brill's disease is a mild form of typhus.

"It was not known that the throat and middle ear are connected by the eustachian tube until Eustachius, a sixteenth century Italian physician, discovered the fact, and even a hundred years ago there were still fresh fields for the ambitious anatomist to explore.

"Caesarean section is so-called because it is re-

ported that Julius Caesar was brought into the world by such an operation.

"The Schick, Wassermann, and Widal tests, so important today, are all named for the men who devised them.

"If a layman afflicted by some new malady becomes jealous of its christening, let him remember that it takes a Julius Caesar to have his name commemorated medically."

## NEW TREATMENT FOR PARESIS

Paresis, the disease known as general paralysis or softening of the brain, has always been considered by physicians to be a progressively fatal disease. Few patients who suffer from this disease recover. The mind is affected, and during a long period of years the symptoms increase in their intensity. When the drug known as arsenphenamine (salvarsan, "606") was discovered to have special virtues in the treatment of syphilis, and when it was known that general paralysis was due to the effects of syphilitic disease, it was hoped that some advance might be made in controlling the progress of paresis. Thus far attempts have not resulted in any striking recoveries, although in some instances highly beneficial effects have been reported. This state of affairs has caused medical investigators to continue their attempts to find a method of controlling the progress of paresis. During the last few years certain German investigators, basing their efforts on the knowledge that certain types of bacteria cannot live in the presence of others, just as certain human beings find it difficult to live with other species of animals, have attempted to reach the cause of paresis by injection into patients with paresis the blood of patients with malaria. While the results have not been conclusive, the method has been carried out on a large number of patients and in a considerable number of instances with sufficient success to warrant the belief that it may have virtue. It is interesting to learn the process by which the investigators arrived at their decision to use this method. They had observed that patients with paresis tended to improve when they became ill with malaria. It has long been known that malaria may be controlled by the proper administration of quinine. It was therefore decided by the European investigators to inject blood infected with organisms of malaria into the patients, and then, after they had been subjected for a certain time to the malaria, to cure them of the latter disease with quinine. As has been said, the results in many instances were strikingly effective, and the method has now been extended to certain institutions in this country where it is being studied under controlled conditions. No doubt within the next few years its real value will become apparent.—*Hygeia*, June, 1923.

# THE JOURNAL

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### EDITORIAL

#### DATA ON ALLEGED LACK OF PHYSI- CIANS AND INCREASE OF IRREGULARS

E. P. Lyon, Dean, Medical School, Min-  
nesota University, has this to say in Amer-  
ican Medical Association Bulletin, May,  
1915, about the charge that scarcity of reg-  
ular physicians is responsible for the in-  
crease in Chiropractics, Osteopaths, etc.:

The data is made up of investigations of  
towns of 200 to 700 people, where there may  
have been no physician within 25 to 50  
miles; and, of towns 1,000 or over. He notes  
the many sides and discoveries to the mat-  
ter with the following statements:

Thirty towns reported no doctors, no

osteopath, no chiropractor. Fifteen towns  
have a doctor but have no osteopath or  
chiropractor. Two towns have each one  
doctor and one chiropractor. All were of  
less than 1,000 people and most of them of  
less than 500.

**"In not a single place do we find an osteo-  
path or chiropractor serving the people with  
no regular physician available.** This seems  
to me to settle the contention that the ir-  
regulars are filling the alleged need for doc-  
tors in small country places.

"When we consider larger rural places—  
towns of 1,000 and over—one always finds  
one or more physicians. Of course, the ir-  
regulars are also likely to be found in such  
towns. The point is that they are **not tak-  
ing the place** of the doctor, but are **addition-  
al** to him.

"There are at present in Minnesota three  
health officers who are osteopaths. These  
are all in large towns where physicians are  
located. No chiropractor is a health of-  
ficer at the present time.

" . . . The osteopaths and chiroprac-  
tors go to the larger cities and towns just  
as the doctors do. They do not go to the  
small villages where there is no doctor.  
Whatever reason there may be for the ir-  
regulars' existence, it is not to fill vacancies  
due to a lack of physicians. The people are  
not, as some say, crying for poorly prepared  
doctors because they cannot get better ones.  
There is no need, at least in the Northwest,  
to lower the standards of medical educa-  
tion or to found more medical colleges or  
to increase medical school classes beyond  
the limit of efficient teaching."

#### BEWARE THE "OLE SWIMMIN' HOLE"

Nothing is more dangerous, nor one thing  
more full of potential destruction than the  
average casual, joyfully looked forward to  
summer vacation, with its vistas of green  
trees, valleys, running streams, deep, blue,  
placid pools. About and around every one  
of them lurks the deadly **anopheles** and not  
only that generously sized family, but  
others of the insect life capable of inaugu-  
rating destruction finally to a giant human  
frame.

It should be remembered that there is  
hardly a spot in Oklahoma, not having such  
dangerous possibilities. It should not be  
forgotten that every stream of brilliantly  
clear water is not necessarily a **pure** stream;  
it may be just as full of typhoid or dysen-  
teric infection, of **colon bacillus** as a rank,  
dank sewer, and this applies to every "swim-

min' hole." It especially applies to the so-called "purified" natatoriums, where a sense of false security is given the attendant with the posted statement that "this water has been purified" with "so and so's" system of water purification, often a system utterly worthless, and even if it were finely proficient, the moment a human body hurtles into it it becomes a possible source of dangerous infection from the impurities carried into it by the natty swimmer, who may be a syphilitic, gonorrhoeic, dysenteric, etc.

One of the most dangerous prevalent ideas, and widely prevalent ideas at that, is the one wherein the outer goes to some clear hill stream, the water apparently matchless, yet full of human excreta and death.

If it were left to the writer he would advise everyone who contemplates such an outing, to first be sure of the water supply; to be especially suspicious of the swimming pool full of other people, infectious as they are most sure to be; to be especially suspicious of every type of insect, and, above all things to sleep in a tent well screened from insect life by adequate mosquito bars.

#### COMMON SENSE IN PHYSICAL EXAMINATION OF SCHOOL CHILDREN

Dr. E. R. Hayhurst (*Ohio State Medical Journal*) raises the question of the lack of a proper modicum of common sense in examination of school children, in examination especially of those returned from recent illnesses. He notes the collapse of different children after rather ordinary physical effort, which, under ordinary circumstances, they should have withstood without trouble. He also notes the inefficiency of the average, casual examination as given to these children, and, rightly demands a higher grade of efficiency in the work and a larger amount of injection of the personal equation into the cases. They cannot be treated as so many oak posts or pieces of steel. Noting a sufficient appropriation, he can only find the door of medical inefficiency open and unattended as a cause for the condition.

The subject is timely just now, for in a few weeks thousands of Oklahoma's children will start in on their daily grind of school duties, only after a few weeks, hundreds of them will "lay off" for from a few days to a few weeks on account of illnesses, principally respiratory or exanthematous. Now after their return is the time and place for the exposition of the fine Italian

hand of a good faith medical examiner, and the work should not be slurred over, the skin, mouth, throat, nose, heart and chest should be thoroughly investigated, for anyone of them may hold potential destruction or weeks of ill health, all avoidable by a good faith examination at the right time, which means before the latent matter has infested the entire system. At this time, ordinarily, very simple medical and direct application treatment will suffice to avert what may prove, if neglected, to become a serious matter. The only person who is in position to do this is the examiner himself. If he is not an honest man, unintelligent, get rid of him and get an honest, intelligent substitute who will function as he should.

#### THE QUESTIONNAIRE FIEND

Well, at the outset we are tired of him, very tired. Probably it is not exaggeration to say that seven-tenths of the silly questions he asks are answerable by a brief inspection of any old directory of the A. M. A., past or present. He is in a class with the Ass who writes into the office asking for a list of county society presidents and secretaries, forgetting in the same breath that that information is carried in the back of nearly every Journal he receives. We are tired of him. In August he is especially obnoxious. All he has to do is to wake up for a minute or so and recall that the very list he seeks is obtainable in any number of publications, lying at his elbow. **Tired, TIRED**, we are very tired of that careless fellow who wears us out answering questions, to which he has the answer all around him.

#### THE SCHOOL CHILDREN HAD THEIR TURN

"Next we made a great jump to the children in school. Wherever teachers and parents are really playing the game of life fairly by the children, they have arranged that every kiddie, when he enters school, and two or three times before he graduates, shall have a careful study of heart, lungs, eyes, throat, teeth, back, and joints, so that the many handicaps, little and big, which often spoil the chance of learning, and later of working, may be corrected early. These medical inspections in school are just what we mean by health examinations, except that unfortunately the schools and the health departments provide too few doctors to give most of the children more than a superficial and incomplete inspection."

—Haven Emerson in *Tygeia*, June, 1923.

## PLAGIARISM

By H. Addington Bruce

As newspaper readers are pretty generally aware, the ugly charge of plagiarism, of literary theft, has lately been laid against Louis Hemon, author of that delightful story of pioneer life in Quebec, "Maria Chapdelaine."

Hemon, who being dead cannot defend himself, is accused of having pirated Kipling's short story, "On the City's Wall," in a story called "Youth's Pride" published in a French magazine with Hemon's name as author. Nor does the evidence leave doubt that "Youth's Pride" is something closer than adaptation from Kipling.

But this is not proof that Hemon deliberately passed off Kipling's work as his own. The plagiarism may be more seeming than real, an editor or literary executor perhaps having mistakenly attributed to Hemon the authorship of what Hemon wrote merely as an exercise in translation.

There is still another possibility. This is that Hemon, in writing "Youth's Pride," unconsciously reproduced from memory Kipling's ideas and language while honestly thinking they were his own ideas and language. And the possibility of such unconscious plagiarism is by no means so remote as might be thought.

Some years ago Lowes Dickinson, investigating an alleged case of "spirit control" manifested in automatic writing by one of his personal friends, was able to trace all the "spirit utterances" to a novel read by his friend in childhood. The friend, so far as conscious recollection went, had forgotten all about having read this novel. Yet the automatic script proved that there had been a remarkable retention of the novel's plot and dialogue in the depths of the "medium's" mind.

Other investigators of the so-called "subconscious" have similarly established that a vivid latent memory of ideas and language once heard or read is quite compatible with a complete forgetfulness by the upper consciousness of any reading or hearing of the ideas and language under consideration. This conceivably is what happened in Hemon's case, a mistaking of memories for his own ideas.

Of course, as J. C. Gregory has remarked in a general discussion of forgetfulness, "cryptamnesia, mistaking recollections for fresh thoughts and new perceptions, may be a suspicious refuge for the plagiarist." But it is important to bear in mind that such mistaking is an actual occurrence in mental life.

Hence, most assuredly, when it is a question of plagiarism, the fact of thought and language identity should not hastily be accounted proof positive of wilful stealing. Weight should be given to other factors, such as the supposed plagiarist's general reputation and psychic make-up, before judgment is definitely passed.—Kansas City Star.

*Editorial Notes—Personal and General*

Dr. L. D. Conn, Morris, has located in Tulsa.

Dr. C. D. Dale, Caddo, has moved to Henryetta.

J. A. Morrow, M. D., has removed from Sallisaw to Durant.

Dr. C. M. Bloss, Okemah, is attending the New York Clinics.

Dr. S. A. Rice, Alma, has announced his removal to Duncan.

Dr. and Mrs. R. L. Westover, Okmulgee, visited Indiana points in June.

Dr. and Mrs. J. T. Riley, El Reno, attended the San Francisco meeting.

Dr. Levi Murray is spending a few weeks vacation at Colorado Springs.

Dr. J. B. Lightfoot, Miami, has been appointed city physician for that city.

Dr. D. F. Janeway, Stillwater, is the new county physician for Payne county.

Dr. H. A. Howell, Holdenville, has been appointed health officer for that city.

1. See "Limitation of Osteopathy in Idaho," The Bulletin, April, 1923, page 87.

Dr. W. E. Lamerton, Enid, has been appointed county physician for Garfield county.

Dr. E. C. Byram, Holdenville, has relocated in Okmulgee in the Commerce Building.

F. E. Rushing, M. D., has left Coalgate and located at 404 Security Building, Tulsa.

Dr. Samuel N. Stone has been appointed Health Officer of Edmond for the third time.

Dr. and Mrs. H. T. Ballantine, Muskogee, are spending the summer at Calhoun, Ky.

Dr. W. B. Mead, Lawton, has been appointed county physician for Comanche County.

Dr. R. C. Meloy, of Claremore, has been appointed county physician of Rogers County.

Dr. and Mrs. C. W. Heitzman, of Muskogee, are spending a few weeks vacation in Canada.

W. M. Duffy, M. D., has left Braden and is now located at 2814 Spencer Street, Dallas, Texas.

Dr. Leonard Williams, Pawhuska, is in Chicago where he will do special work for several weeks.

R. B. Seay, M. D., of Oklahoma City, has moved to Memphis, Tennessee, about the first of July.

Dr. Lin Alexander has been appointed county Physician of Okmulgee County.

Dr. and Mrs. A. L. Blesh, Oklahoma City, will spend the summer in Estes Park.

Dr. W. P. Greening, Pauls Valley, has returned from a visit to the eye, ear, nose and throat clinics of Denver.

Dr. and Mrs. E. S. Lain and daughters, returned to Oklahoma City from a month's vacation on the Pacific coast.

Dr. and Mrs. W. E. Flesher, Oklahoma City, visited Bella Vista and other Northern Arkansas places in July.

Claude B. Norris, M. D., is now located at the Lakeside Hospital, Cleveland, Ohio, having left Oklahoma City.

J. E. Brookshire, M. D., has removed from Nowata to Alhambra Square, 15th and Peoria, Tulsa, about July 11th.

Dr. H. L. Summers, of Osage is getting some good work attending the Clinics in Chicago, during the month of July.

Dr. Banting will receive \$7,500 annually for the rest of his life if plans of the Canadian House of Commons materialize.

Drs. J. B. Smith and L. F. Lee, of Durant, are motoring to points in southern Texas, to be gone for ten days.

Dr. J. L. Austin, of Durant, is locating at Roswell, New Mexico, temporarily on account of his family's health.

Dr. Roscoe Walker, Pawhuska, and family are motoring to Minnesota via Kansas to spend a month's vacation.

Dr. David D. Paulus, of Oklahoma City, is spending a month attending clinics in Canada, New York and Boston.

Dr. P. M. Richardson, of Cushing, President of the Paine County Medical Society, attended the Surgical Clinics of Chicago during July.

Dr. J. O. Hudson, of Bartlesville, is taking a ten weeks' post-graduate course at the New York City Post Graduate Medical School.

Drs. Walter and Eva Wells, Oklahoma City, have just returned from an extended visit to the clinics of New York, Buffalo, Chicago and Canada.

Dr. Roscoe Walker, of Pawhuska, is spending some time at Rochester, while his family will enjoy a vacation at the nearby lakes and resorts.

Dr. C. E. Barker, Oklahoma City, has been re-appointed, after some "backing and filling" by the city commissioners, to the office of city physician.

Dr. S. E. Mitchell, Muskogee, has been appointed a "full-time" man on the staff of the Soldiers Memorial Hospital and has made his home at the institution.

Dr. W. Albert Cook, Tulsa, delegate to the A. M. A. San Francisco Meeting drew appointment as a member of the Committee on Medical Education for the coming year.

Colonel Hugh Scott, Muskogee, was re-elected President of the Association of Reserve Officers, United States Public Health Service, recently meeting in Washington.

Osage County medical society held a meeting at Pawhuska, July 2. Several Tulsa Physicians attended the meeting. After the scientific session refreshments were served.

Dr. and Mrs. H. D. Shankle and daughter, Helen Louise, of Hartshorne, spent the month of July in Asheville, N. C. (The Land of the Sky) and on the lakes in northern Ohio.

Dr. Ephraim R. Barker, of Healdton, has returned from the Mayo Hospital at Rochester, Minn., where he was operated upon for varicose veins of the leg, and is getting along fine.

Dr. H. A. Wagner, Shawnee, was host to the nurses of the Shawnee General Hospital July 11, when he treated them to a swimming party and liquid refreshments fitting the occasion.

Dr. J. M. Byrum, Shawnee, Delegate to the San Francisco meeting managed to "clean up" as advertising solicitor for the JOURNAL, thus making his trip doubly worth while to the Association.

Dr. Floyd J. Bolend, Oklahoma City, as Commander of the 120th medical regiment recently had the satisfaction of seeing his command awarded two silver cups as trophies for the work performed.

Noble County Medical Society met at the Carnegie Library, Perry, and a clinic of 28 tonsil cases was given by Dr. C. B. Barker, of Guthrie, assisted by Drs. Owen, Coldiron, Gaines, Darrow and Cavett.

Dr. A. Y. Easterwood, Ardmore's City Physician claims the palm for his city as to sanitary conditions at present. Well, that is fine, just keep it that way. A matter of no small difficulty in a rapidly growing oil city.

McIntosh County Medical Society met at Eufaula July 3rd, and presented an interesting program: "Organo-Therapy" by Dr. G. W. West; Report of Delegate to the State Association Meeting; and a Clinic—Report of Cases.

July Cancer Editorials, due to an error, were not signed as such special editorials usually are. The one entitled "Cancer" was written by Dr. G. A. Wall, Tulsa, that entitled "Truth, The Whole Truth, Nothing But the Truth," by Dr. Ralph V. Smith, Tulsa.

Garvin County physicians entertained themselves to a thirty plate banquet at Pauls Valley, June 27th, that is, they partook after their hospitable wives had prepared the feast. Several out of town physicians were present at both the scientific and social meetings.

Dr. M. K. Thompson, Muskogee, simply will not down when it comes to taking on woes as a school board member. At nearly every meeting a "tempest" arises in which the doughty doctor is either at the vortex or the rim of the trouble, usually all over the pool before the affair is over.

Dr. Albert Aisenstadt, of Pitcher, was married at Long Beach, Cal., June 16, to Mrs. Minnie Spencer, formerly Secretary of the American Hospital at Pitcher. The Doctor and his bride are returning home by motor through the northwest including a visit to Chicago.

Dr. J. A. Milroy, Okmulgee, is asking, by the civil suit route, the sum of \$1,092.00 for services he alleges he performed during two months as

county physician for Okmulgee County. Itemized statement shows much of the work was for professional calls at the county jail.

Dr. D. A. Beard, Tulsa, City Superintendent of Health, has nominated Drs. A. W. Pigford, A. V. Emerson, T. W. Stallings, C. S. Summers and I. N. Tuckett as a board of health that will "actually function." We agree to the list and stand with him in his idea that they will produce results.

Oklahoma Delegates to the A. M. A. were present in number sufficient to please the most critical taste of the Frisco Meeting. In addition to the regular delegates, Drs. W. Albert Cook and J. M. Byrum. Dr. E. S. Lain managed to squeeze into a permanent seat when his principal representing the section of Dermatology and Syphilology found he could not be present.

"Unscrupulous Physicians," according to the McAlester News Capitol are responsible for the irksome restrictions imposed upon reputable physicians in the use of narcotics and alcoholics. True, all repressive laws and regulations are due solely to the fact that a few unscrupulous or foolish people insist on doing what the ordinary honest man will not do.

Dr. G. M. Clifton, Norman, is no longer a member of the University Board of Regents. Internecine strife among board members is placed as the cause of Dr. Clifton's disconnection from the board. It is said, Dr. Clifton, a Walton appointee, with another member of the board, brought about a deadlock which finally resulted in Dr. Clifton becoming disgusted and handing in his resignation.

"TEN YEARS AGO TODAY" in the Muskogee Phoenix of July 22 reads in part as follows: Four Muskogee boys . . . Tom and Dick Lowry appeared on the regular vaudeville bill at the Broadway Theatre." Oklahoma County Society has the right to tip. Whenever a real "show" is desired by that organization all they have to do is to call on their genial secretary and his brother, the rest will be consummated by that pair of high-class "artists."

Dr. I. W. Bollinger, Henryetta, was named by the county commissioners as physician for the south side of Okmulgee County, geographical arrangements making it necessary to so sub-divide that county. Funny that few, if any of our job creating county executives have never thought of such divisional possibilities before this. Why, if they can legally halve the county, they can quarter it, in the face of necessity, thus creating many new jobs for the faithful. Okmulgee, however, really needs such division.

"Persons who will be operated upon in 1942 for gall-bladder troubles are beginning to show the first symptoms today," so said Dr. Walter C. Alvarez, San Francisco, to a group of medical listeners, a statement which was promptly taken up and heralded by the daily papers of that great metropolis. The pity of it all lies in the fact that many of the victims will be treated over the years to come for "acute indigestion," "gastritis," etc., until the fatal day comes when it is too late for any sort of intervention, surgical or medical to save the unfortunate.

Muskogee's "swimmin' hole" at Honor Heights is clean, according to report of Dr. F. W. Ewing,

city superintendent of health; the report arose from the fact that a "Junior" Civitan member stated that "all other cities in Oklahoma" demanded health certificates as prerequisites to entering the pool, a statement which everyone, of course, knows is not correct. However, no pool can be said to be "clean" a moment after a human body plunges into it. There is always a small element of danger present, regardless of any and all attempts to keep the water bacteriologically clean.

Muskogee County physicians "set 'em up" to themselves with a chicken picnic, held on the banks of Fourteen Mile Creek, in Cherokee County, Monday, July 16. The invited guests were Drs. Ralph V. Smith, President and G. A. Wall, Councilor, Tulsa. The cooking was under the supervision of Dr. Claude Thompson, who prepared his celebrated "smudge" for the chicken, without which no barbecued chicken may be said to have reached that stage of perfection as an edible of the high class admitted by celebrated gourmards to be the "best ever." Dr. A. L. Stocks, Muskogee, also lent his invaluable advice for the occasion.

MOSQUITOES, CHIGGERS, BLONDES, BRUNETTES—"A Muskogee doctor has a theory that mosquitoes and chiggers favor blondes over brunettes as popular feeding grounds. The girl on south Main, who has been both, says the doctor doesn't know what he is talking about; that her experience convinces her that mosquitoes and chiggers are unbiased, impartial and without prejudice."—Tulsa World, July 7.

"Fifty years ago a man was considered old at 60. Today he is only in the prime of life, with many years of usefulness ahead of him. In Poland the oldest inhabitant is still farming at the age of 132 and he isn't worrying about the approach of death . . . we appear to be enjoying longer lives . . . a fact which the average man is unable to explain. But perhaps our local physicians can throw some light upon a subject of such vital interest to us all. Speak up and be heard. Yes, speak up. They know and can tell why the span of life is lengthening, as well as why their professional income in like manner is dwindling."—Editor.

"A Barricade to Progress" is the way the Okemah News quotes Dr. A. E. Davenport, State Commissioner of Health, as regarding the Oklahoma physician. This alleged statement is inspired by the idea that we are lax and derelict in reporting deaths and births. No doubt many are so, but it is a good deal like the kettle calling the pot black. The writer recalls, when applying for the solution of nitrate of silver, provided free for the new born Oklahoma infant, that this same office of the State Commissioner of Health replied that it was so much trouble that they had not gotten to it yet and probably would not be able to supply it for several months. However, this was not under Dr. Davenport's regime.

Dr. C. M. Vaughan, Tulsa, is the physician who asked the courts for a permanent restraining order restraining the Tulsa County Medical Society and Dr. Charles H. Haralson, Secretary of the Society from giving Tulsa Hospitals a list of members of the Tulsa County Medical Society. As we recall it this is the same Dr. Vaughan, whom the Society, last year dropped from its rolls. He is not now among the "elect" for 1923, therefore, we are not greatly surprised at the source of the injunction sought. As is often the case, a member, probably

only hanging on the edges of medical respectability, seems to have been the instrument by which the intentions (though they were not attempted in secret) leaked to the men in question.

**New Officers for the A. M. A. for 1923-1924, elected at the San Francisco meeting last month are:**

President-Elect—William Allen Pusey, Chicago.

Vice-President—William E. Musgrave, San Francisco.

Secretary—Olin West, Chicago.

Treasurer—Austin A. Hayden, Chicago.

Speaker House of Delegates—Frederick C. Warnshuis, Grand Rapids, Mich.

Vice-Speaker House of Delegates—Rock Sleys-ter, Wauwatosa, Wis.

Board of Trustees—Term expires 1926: Chas. W. Richardson, Washington, D. C.; J. J. Upham, Columbus, Ohio; W. T. Williamson, Portland, Ore.

Judicial Council—W. S. Thayer, Baltimore, Md.

Council on Medical Education and Hospitals—Arthur Dean Bevan, Chicago; Louis B. Wilson, Rochester, Minn.

Council on Scientific Assembly—Roger S. Morris, Cincinnati, Ohio.

Osage County Doctors favor fixing standard rate of fees. Well, we do not, we do not believe such standardization will fit any community or render anything but harm to the doctors. In the first place, Osage, of all counties, has people with the financial ability to pay unbelievable fees; on the contrary, just like other communities, it has the very dregs of humanity, people unable to not only not pay a minimum fee, but utterly unable to pay any sort of fee. For these, to us apparently two good and sufficient reasons, Osage County should fix no bill whatever, but the individual should be allowed in his discretion to charge what he deems a reasonable fee, fitting the individual in question. There is another phase of it, too, which should not be overlooked by humanitarians: that is the custom of a certain element among us of wringing the last Shylock's penny from the poor and needy, and from which they have no possible escape. For instance, a railway employee, certainly not a Croesus at present, engenders a terrific, but absolutely unavoidable bill for services to some loved child or wife. Result, Dr. Shylock presents his bill in accordance with the standards set by the county medical society, the railway man knows he can never get it paid, but unless he does pay it Dr. Shylock promptly attaches his wages, files garnishment against the man with his employers, result, loss of position, man, children, wife on the streets and helpless. Doctors of all people should temper the winds to the unfortunate, should see to it that these loopholes are closed by which the heartless and callous wring every possible shred of money they can get from the helpless man who had to go to him in his hour of trouble over no fault of his, but over causes over which he had no control.

#### AN EXCELLENT SUGGESTION

Never, as this magazine has pointed out before, has the splendid and dignified title "Doctor" been more mishandled by usage than in the twentieth century. It is high time that the profession adopt the policy advocated by county medical societies in California and elsewhere—that of having physicians employ the letters "M.D." instead of the abbreviation "Dr."

The greatest living argument against the continued use of the prefix "Dr." is found in its abuse by the horde of cultists who are employing it without let or license. It is bad enough to have them at large, but they can at least be kept from overwhelming the community if they are forced to admit that they are not doctors of medicine.—Exchange.

#### CHIROPRACTOR LIABLE FOR CARE, SKILL AND KNOWLEDGE IN DIAGNOSIS

Chiropractic quibbling may not avail a chiropractor in Wisconsin, who through negligence, ignorance or unskilfulness fails to diagnose the disease from which his patient is suffering, according to a decision of the supreme court of Wisconsin, April 3, in the case of *Kuschler v. Volkmann*;<sup>1</sup> and in diagnosing a case, a chiropractor must exercise the care and skill that is usually exercised by a recognized school of the medical profession. The fact that chiropractors abstain from the use of words like "diagnosis," "treatment" or "disease," said the court, is immaterial. What they hold themselves out to do and what they do is to treat disease, and the substitution of words like "analysis," "palpation" and "adjustment" does not change the nature of their act.

The plaintiff, suffering from nausea, nervousness and headache following a head injury, applied to the defendant, a chiropractor, in September, 1918, for relief and cure. The chiropractor, believing that the nervousness and headache were due to a derangement of the stomach, treated him accordingly. Treatment proved unavailing, and the chiropractor advised the plaintiff, in May, 1919, to go West, in the hope of relief. The plaintiff did so, but the headaches and dizziness, from which he continually suffered, became more severe, and finally he became at times blind. Sept. 10, 1919, the plaintiff presented himself for treatment at a hospital in Chicago, and there his malady was immediately diagnosed as a brain tumor. An operation was done simply to relieve the intracranial pressure, for because of the long time the tumor had been allowed to grow, it was impossible to remove it.

The chiropractic defendant was charged with responsibility because of alleged negligence and want of understanding and skill. He demurred to the declaration, on the ground that one who treats the sick and injured is entitled to be judged according to the principles and methods employed by the school or sect to which he belongs, and he claimed that he had treated the plaintiff according to the methods used by chiropractors. The demurrer was sustained in the lower court. On appeal, the supreme court of Wisconsin said that had the complaint been grounded on neglect or unskilfulness in treatment only, the action of the trial court would have been correct. The complaint alleged, however, neglect or unskilfulness in diagnosis. While the duty of diagnosis is ordinarily assumed and performed by licensed physicians, it may be assumed by others, and the defendant having assumed to perform that duty was bound to exercise the care and skill in so doing that is usually exercised by a recognized school of the medical profession. The supreme court, therefore, overruled the demurrer and remanded the case to the trial court for further proceedings.—*Jour. A. M. A.*

## FURTHER LIGHT ON THE USE OF TOBACCO AS A CAUSE OF AMBLYOPIA

June 11, 1923.

Dr. Claude A. Thompson, Editor,  
Journal of the Oklahoma State Medical Ass'n.,  
Muskogee, Okla.

Dear Doctor:

I have just read your criticism of my paper on amblyopia and especially with my reference to the use of tobacco as a cause of amblyopia.

In the first instance, the lay press, from which you are commenting, misquoted my remarks, but then you should always make allowance, when reading a quotation of a scientific article in a newspaper for their extravagance given to sensation.

I wish to take issue with you on the statement you make in your criticism "of course, everyone who knows anything about it knows tobacco does not cause blindness."

You have evidently forgotten your teachings on toxic amblyopia. Quoting from Tsch's, which was the principle text book on ophthalmology used in the medical schools when we attended college, says:

"Retro-bulbar neuritis is either acute or chronic in its development. The chronic cases usually depend upon chronic poisoning, particularly that produced by tobacco." Also "The cause of tobacco amblyopia is the excessive use of tobacco whether by smoking or chewing."

I do not know of a single authority that sustains your statement, that tobacco will not cause blindness.

I have had a number of cases in my own practice, and every authority on ophthalmology that I have read cites tobacco as a cause of toxic amblyopia.

That you may have a clear conception of just what I stated, I am inclosing a copy for your perusal. Am inclosing postage for its return.

I take no offense at your remarks, however, I know in your criticism you were prompted by a sense of duty, only being misled by the sensational way in which the lay press quoted me.

Yours very truly,

J. R. Phelan.

The JOURNAL is glad to publish Dr. Phelan's letter of above date. It would have had publication earlier, but was mislaid in another office while the matter was being considered by our expert advisor.—The Editor.

## BOOK REVIEWS

**APPLIED PSYCHOLOGY FOR NURSES.** An introduction thereto by Donald A. Laird, Assistant Professor Psychology, University of Wyoming; Lecturer in Nursing Psychology, Ivinson Memorial Hospital School of Nursing, Illustrated. Cloth, 236 pages. Price \$2.50. J. B. Lippincott Company, Philadelphia.

**THE SURGICAL CLINICS OF NORTH AMERICA.** Volume Three, Number Three, June, 1923. San Francisco Number. Paper, Illustrated 885 pages. Issued bi-monthly. Price \$12.00 Annually. W. B. Saunders Company, Philadelphia.

This issue is filled with contributions from such

pace-makers as Emmett Rixford, Walter W. Boardman, Edwin I. Bartlett, Alanson Weeks, Alfred Spalding and others which space prohibits noting. However, this issue is of the same high class maintained by its predecessors, and that is perhaps sufficient to say of its high character.

**INTERNATIONAL CLINICS.** Thirty-third Series, Volume Two. Edited by Henry W. Cattell, A. M., M. D., with the collaboration of Chas. H. Mayo, Sir John Rose Bradford, M. D.; Hugh S. Cumming, M. D., D. P. H.; William S. Thayer, M. D.; John G. Clark, M. D.; Frank Billings, M. D.; James J. Walsh, M. D.; A. C. Phedran, M. D.; Charles G. Cumston, M. D.; Sir Humphrey Rolleston, K. C. B., M. D., D. C. L.; John Foote, M. D.; Seale Harris, M. D.; Charles D. Lockwood, M. D., A. H.; and James Burnett, M. D. Cloth, illustrated, with several plates in color, 304 pages. Price \$2.50 per volume, the series \$10.00.

This issue starts out with a masterpiece on "Insulin" by Drs. F. G. Banting, who perfected the treatment, Seale Harris, of Birmingham, who has made diabetes and similar disorders of internal secretions and metabolism a special study for years, Louis P. Hamburger, who treats of the matter in connection with diabetes mellitus and Orlando H. Petty on the same subject. All together, it is a masterly array of known facts and deductions from real and experimental work. "Blood-Transfusion Made Easy," by Charles Goodman, M. D., makes of this subject, as is indicated, one of ease. "Problems in Surgical Diagnosis, Pathology and Treatment," by C. G. Cumston is an interesting article. "The Pathology of Will and Voluntary Action" is an unusual article dealing with obscure and deranged mental processes by Thos. Vernor Moore, Washington. Throughout this issue maintains the high standard always maintained by the International Clinics, a standard which makes every issue one worth while.

**NEW AND NONOFFICIAL REMEDIES, 1923,** containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1923. Cloth. Price, postpaid, \$1.50. Pp. 415+XXXVI. Chicago: American Medical Association, 1923.

The progressive, up-to-date physician cannot dispense with the newer remedies, proprietary and nonproprietary. Yet he can neither select them on the basis of the manufacturers' claims alone, nor devote his patients to experiments while he tries out those claims.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually presents the American medical profession with disinterested, critical information about the proprietary medicines which are offered to the profession, and which the Council deems worthy of recognition. In addition to the descriptions of proprietary preparations, the book contains descriptions of those nonofficial remedies which the Council deems deserving of consideration by the profession.

A valuable feature of the book is the grouping of preparations in classes. Each of these is introduced by a general discussion of the group. Thus the silver preparations, the iodine preparations, the arsenic preparations, the animal organ preparations, the biologic products, etc., each is pre-

ceded by a general, thoroughly up-to-date discussion of the particular group. These general articles compare the value of the products included in the group with similar pharmacopoeial and other established drugs which it is proposed that these proprietary preparations shall supplant.

A glance at the preface of this volume shows that the book has been extensively revised. In fact each edition of New and Nonofficial Remedies is essentially a newly written book, brought up to date by those who speak with authority on the various phases of therapeutics.

Physicians who wish to know why a given proprietary is not described in New and Nonofficial Remedies will find the References to Proprietary and Unofficial Articles not found in N. N. R. of much value. In this chapter (in the back of the book) are given references to published articles dealing with preparations which have not been accepted.

New and Nonofficial Remedies should be in the hands of all physicians who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

The book will be sent postpaid by the American Medical Association, 535 North Dearborn Street, Chicago, on receipt of one dollar and fifty cents.

### THE PREVENTION OF RABIES

Dr. J. G. Cumming, formerly of Ann Arbor, Mich., has subjected rabies vaccine to certain manipulations which, it is claimed, make it perfectly safe in the hands of any physician, without in the least degree impairing its effectiveness. In fact, we are told that the Cumming vaccine (made from the brain of rabid animals) is more active confers immunity more rapidly, than the desiccated cord with which the classic Pasteur treatment is performed.

Rabies Vaccine (Cumming) is supplied by Parke, Davis & Co., in packages of seven doses, three such packages for a complete series of 21 daily injections, or two packages (14 doses) in cases of slight wounds on the lower limbs. The vaccine is shipped in installments to minimize the risk of exposure to high temperatures.

Parke, Davis & Co., have a booklet on Rabies Vaccine which they offer to all medical inquirers free.

**EPIDEMIOLOGY AND PUBLIC HEALTH** in Three Volumes. Volume One a Text and Reference Book for Physicians, Medical Students and Health Workers by Victor C. Vaughan, M. D., L. L. D., Chairman of the Division on Medical Sciences of the National Research Council; Emeritus Professor of Hygiene in the University of Michigan; Assisted by Henry F. Vaughan, M. S., Dr. P. H., Commissioner of Health of the City of Detroit and George T. Palmer, M. S., Dr. P. H., Epidemiologist for the Health Department of the City of Detroit. Cloth, illustrated, 668 pages. Price \$9.00. C. V. Mosby Company, St. Louis.

Volume one is devoted to the problems of respiratory infections. It is a waste of time to catalogue the various infections here considered, but the writer hopes to give the reader an idea of the beautiful and masterly manner in which Dr. Vaughan has handled his subject, by repetition of certain lines from the preface alone the very first

of which attract and challenge the reader's attention:

"The most vivid, and certainly the most distressing pictures covering the walls of the memory chamber of my brain were painted by the invisible hand of epidemic disease. I spent the summer of 1865 in Southern Illinois, then known as Egypt, where at that time a frequent greeting was, 'This is my chill day.' The great majority of our friends and neighbors had a malarial paroxysm each alternate day. At the time of the World's Fair, Chicago, . . . the fact that the water supply . . . was badly and specifically polluted . . . threatened the success of this exposition . . . the commission found the water supply so badly contaminated that it recommended the laying of a pipe from the spring near Waukesha, Wisconsin, to the Fair Grounds. In pre-antitoxin days diphtheria was a veritable scourge in the Northwest. I saw in a village in Michigan diphtheria with every possible complication and sequel. The physician of the community had never seen the inside of a medical school . . . the body was taken to the church, the school children filed in and each kissed the corpse." And so his story goes, covering the vast experiences of a lifetime, winding up with the World War, in which he saw much service. His personal experiences include observations during the time typhus, typhoid, yellow fever, dysentery were the great toll takers of human life. The book is divided into twenty chapters from al-buminal diseases to weather and diseases.

**CEREBROSPINAL FLUID** in Health and Disease by Abraham Levinson, B. S., M. D., Associate in Pediatrics, Northwestern University Medical School; Attending Physician, Department of Contagious Diseases, Cook County Hospital, Attending Pediatrician, Sarah Morris, Hospital for Children of the Michael Reese Hospital; Attending Pediatrician, Mt. Sinai Hospital, with a foreword by Ludvig Hektoen, with 69 illustrations, including five color plates, second edition thoroughly revised. Cloth, 267 pages. Price \$5.00. C. V. Mosby Company, St. Louis.

**DISEASES OF THE THYROID GLAND** by Arthur E. Hertzler, M. D., F. A. C. S., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halstead Hospital, Halstead, Kansas; Surgeon to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to Provident Hospital, Kansas City, Kansas, with a chapter on hospital management of goiter patients by Victor E. Chesky, A. B., M. D., Associate Surgeon to Halstead Hospital. One hundred six original illustrations. Cloth, 245 pages. Price \$5.00. The C. V. Mosby Company, St. Louis.

When Hertzler says anything about malignancy and its allied conditions, those who know promptly take notice, for they know something worth while is going to be said. Perhaps he has no superior in the America's when consideration of tumors is at hand. His years of arduous, systematic work and painstaking methods have produced the greatest compilation upon the subject known to the America Medical Public today. In this work there is no exception to the sentiments above stated.

**EYE, EAR, NOSE AND THROAT**

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

**THE ELECTROCOAGULATION METHOD OF TREATING DISEASED TONSILS.—Novak, Frank J., Jr.**

Journal American Medical Assn., 1923, 1842.

Due to the favorable comment and wide spread publicity of the electrocoagulation method of treating diseased tonsils Novak used this method in a series of one hundred cases.

During the operation the patients were comfortable. No bleeding occurred and the dexterity and skill for the operation was no greater than that required to apply a swab of silver nitrate to the tonsil.

The results were unsatisfactory as all of the patients embarked on a stormy experience within a few hours after the operation. The pain was uncontrollable save by the administration of liberal doses of morphin. All experienced extreme difficulty in swallowing, much greater than that usually looked for after tonsillectomy. The palate was extremely edematous and speech was impossible. The reaction persisted through the sixth day and then gradually subsided. In a few of the cases the lower pole of the tonsil was present after operation.

The very severe reaction, the toxemia, the great pain and the extreme discomfort of the patient immediately following the operation are sufficient to condemn this method. There is no accurate way of determining the dosage to be applied. Nor is it possible to apply the heat with sufficient accuracy to insure the destruction of only the tonsillar tissue. The heat necessary to destroy the tonsil is great enough to penetrate and damage the surrounding tissues. If the aim is to obliterate a crypt, then there is no assurance that a purulent pocket in the fundus of the crypt is not sealed in by a covering of the resulting scar tissue.

The evidence gained by the author from his series of cases shows that the method of electrocoagulation is inaccurate, inadequate and unsatisfactory from the standpoint of the surgeon and patient. Such methods cannot in any manner compete with the accepted present-day methods of tonsillectomy.

**LESSONS TO BE LEARNED FROM THE RESULTS OF TONSILLECTOMIES IN ADULT LIFE.—Alvarez, Walter C.**

Journal American Medical Assn., 1923, 1513.

In an attempt to ascertain the value of tonsillectomy in adults the author carefully questioned 345 patients in whom a tonsillectomy had been performed during the past two or more years. The author also noted that one out of every four cases passing through his office had lost their tonsils.

In the cases suffering from frequent attacks of tonsillitis, the removal of the tonsils proved to be of much benefit. In rheumatic complaints and cleaning up points of focal infection, the author found that a large percentage of the cases had little, if any, relief from tonsillectomy. It is essential to make a careful physical examination before advising tonsillectomy as frequently other causes than a tonsil partially filled with cheesy

matter are found. A review of the tables by Alvarez shows that the poor results in tonsillectomy, from the standpoint of improvement to the patient, occurs in cases where they have little, if any, trouble with the throat, such as tonsillitis and frequent attacks of sore throat.

The author thinks that tonsillectomy should be performed when there is sufficient evidence to warrant the removal of the tonsils but warns against the reckless method of trying to cure all diseases by such methods. Tonsillectomy should not be done for diseases of the throat until the internist has had sufficient time to carefully study the case. Conservatism is the rule except in those cases in which the patient is seriously menaced, or in which there is sufficient evidence for believing that the disease can be influenced by the removal of the foci of infection.

**ORTHOPAEDIC SURGERY**

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

**INFLAMMATION OF THE DEEP CALCANEAL BURSA.—Arthur E. Hertzler, Kansas City, Mo.**

Journal A. M. A., July 7th, 1923. Vol. 81, No. 1.

He describes a bursa which is not constant but which has been found by him to cause symptoms in several cases, and in which operation effected complete cure. The bursa lies under the beginning portion of the abductor hallucis muscle, extending laterally to the point of origin of the flexor brevis digitorum. Beneath it lies the sheath of the tibialis posticus. The flexor hallucis longus and the flexor longus digitorum lie lateral to it. The bursa is separated by these tendons from the long plantar ligament. Clinically, there is tenderness in the front part of the heel just in front of the attachment of the flexor group of muscles, and lateral to the sustentaculum tali. Pronounced pain on deep pressure over this site is the characteristic symptom.

He removes the bursa by means of local anesthesia. A five cm. incision is made below the lower margin of the sustentaculum tali anterior to the spine. An elevator is then passed between the sheath of the tendon of the tibialis posticus tendon and the overlying soft parts. The bursa should be reached at a depth of from three to five cm. After curretting the site or dissecting the bursa, a gauze drain is passed into this area and allowed to remain three or four days.

**FRACTURES OF THE FEMUR IN CHILDREN.**—Carl G. Burdick and Irwin E. Siris of New York. *Annals of Surg.*, Vol. LXXVII, No. 6, June, 1923.

Report on treatment and end results in 268 cases at Bellevue Hospital. The youngest was infant at birth and the oldest 13 years. The greater number were three to seven years. Fifty-five per cent were oblique, 35 per cent transverse and three per cent comminuted. Sixty-four per cent were in the middle third, 20 per cent in the upper third, and nine per cent in the lower third.

Treatment consisted of reduction under anesthetic by means of traction and children up to the age of six were suspended in a Bryant frame, with both legs at right angles to the body, traction being maintained by weights and pulleys, on a

horizontal bar. "The suspension is continued for four weeks and the patient kept in bed another two weeks. In older children plaster spica was used in preference to other forms of splints. Plaster was applied from pelvis to the ankle, and moleskin adhesive straps which had previously been applied extended to a pulley at foot of bed furnishing traction. The Thomas and Hodgkin splints were used in compound fractures, but proved impractical for simple fractures because of natural tossing and activity of the child in bed. Operative treatment was only resorted to in 7.5 per cent of 67 cases and in 3.5 per cent of another series of two hundred and one cases. The decrease in percentage was due to the adoption of the Caliper traction method. The only indication for open operation is interposition of muscle or fascia between the fragments, and this is extremely rare. It was not found in any of his cases.

The majority of cases in which the anatomical approximation of the fracture was not satisfactory were followed for a period of six months to three years. The clinical course has shown that perfect anatomical reduction is not essential for perfect functional recovery in children. Marked displacement and over-riding of the fragments will usually result in a good functional limb without appreciable deformity, tilting of the pelvis or compensatory curvature of the spine. He also found that shortenin, which existed on discharge from the hospital, was not always permanent, and actually presented an appreciable lengthening within a year or two.

## GENERAL MEDICINE

Edited by Wann Langston, M. D.

State University Hospital, Oklahoma City

### THE STANDARD TREATMENT FOR MALARIA.

C. C. Bass, M. D. New York Medical Journal  
—C. C. Bass, M. D. New York Medical Journal, CXVII, No. 12, June 20, 1923.

New York Medical Journal, CXVII, No. 12, June 20, 1923.

The Author quotes the National Malaria Committee: "For the acute attack ten grains of quinine sulphate by mouth three times a day, for a period of at least three or four days, to be followed by ten grains every night before retiring for a period of eight weeks." According to the Author, the definite symptoms of malaria, fever, or chills and fever, as well as other associated symptoms due to active malaria, are controlled by thirty grains of quinine a day. He believes unnecessarily large doses of quinine are given over unduly long periods of time, and states that attacks not relieved by the milder treatment are usually cases of incorrect diagnosis. During six years he has not seen a case fail to yield to the Standard Treatment, and has investigated many cases of reported failure, but not a case in which chills and fever due to malaria failed. One of the reported failures was a case of typhoid and malaria; two in which the quinine recorded as given was not given, and one in which a diagnosis was made on finding one suspicious looking object in the blood.

He concludes that cases not yielding to the Standard Treatment are extremely rare, and so far as his own experience goes, it is one hundred per cent effective in controlling the clinical symptoms of malaria.

### BICHLORIDE OF MERCURY POISONING.—

Thomas A. Carter, M. D., (The National Drug Clerk) XI No. 6, June, 1923.

The author reports his experience in the treatment of one hundred and twenty-eight cases with a loss of but eleven. He points out that while the poison has a specific action on the kidneys, it also has a very definite action upon the stomach and intestines. Where a large dose is taken, it may be found throughout the intestinal canal, and may be eliminated per rectum. This results in necrosis and minute hemorrhagic areas which enlarge and result in greater or less hemorrhage, which is difficult to control.

The Author's method of treatment:

1. Immediate gastric lavage, using plenty of water. Do not give eggs and milk.
2. Sodium phosphite Gr. VI; Sodium acetate Gr. IV; tablets 11, crushed, in one-half glass of water, every hour, day and night.
3. Saline laxative or citrate of magnesia g. s., so that patient has two or three bowel movements a day.
4. Cleanse mouth and teeth frequently with alkaline solution.
5. Measure all urine voided each twenty-four hours. If urine is scanty or suppressed, increase antidote.
6. Hot water bag to abdomen for pain. Avoid morphine.
7. Diet: None for a few days; water freely, preferably distilled or boiled; continue starvation until danger of gastric hemorrhage is past.
8. Do not give hot baths; have patient rest in bed for at least one week.

### HAY FEVER AND POLLEN THERAPY.—Ralph Oakley Clock, M. D.,—N. Y. M. J., CXVI, No. 4, June 20, 1923.

The Author defines Hay Fever as "A condition of hypersensitiveness to pollen proteins and is produced primarily by the inhalation of wind borne pollens." Only those who are sensitized develop hay fever. This sensitiveness increases with the patient's lowered resistance. The fact that only wind borne pollens cause hay fever eliminates the group of insect borne pollens, such as rose, goldenrod, honeysuckle, lily of the valley and daisy as important factors in the production of hay fever.

Pollens causing hay fever are grouped as follows: (1) Trees; (2) Grasses; (3) Chenopods; (4) Amaranths; (5) Docks; (6) Ragweeds; (7) Wormwoods.

Seasons and Causes:

1. February, March and April: Pollen of oak, ash, elm, cottonwood and walnut.
2. Spring Hay Fever, April to July: Pollens of grasses—timothy, June grass, red top and sweet vernal.
3. Summer Hay Fever, June to September: Chenopods, amaranths and docks.
4. Fall Hay Fever, August till first frost: Pollens of the ragweed group; in Pacific and Rocky Mountain States, artemisia group; in the Southwest, amaranth group.

Diagnosis of the particular group can be made by skin tests using as antigen, an extract of a representative pollen of the group.

Treatment: Desensitization with pollen extracts. The Author recommends fifteen doses of glycerolated pollen antigen, of a gradually increasing

number of pollen units (one millionth of a gram of pollen), beginning with two and one-half units and gradually increasing to one thousand units, administered subcutaneously. Pre-seasonal treatment yields best results. Desensitization is not permanent, and is at its height only for a few weeks—hence treatment must be repeated each year.

The Author reports 1578 cases showing remarkable uniformity of favorable results. He concludes: "In view of the favorable results reported herein, it would seem fair to state that the method of giving prophylactic injections of the glycerolated pollen antigen early in the season offers the best means of any method thus far advanced for the preventive treatment of hay fever."

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.

611 1st Nat'l. Bank Bldg., Oklahoma City

#### THE DISCOVERER OF THE MODE OF PRODUCTION OF BREATH SOUNDS.—G. E. Bushnell, *Jour. of American Medical Association*, March 31, 1923.

Dr. Bushnell reported the discovery that it was possible to abolish all breath sounds, as heard over the larynx and the chest by a voluntary separation of the vocal cords. But he had been anticipated by a Frenchman, Beau, June 10, 1834. Beau had a patient with "effusion of the right pleura," in whom there was a marked bronchial soufflé. Wishing to know how much of this soufflé was due to the respiratory sounds, he instructed the patient to breath with less noise. The soufflé was diminished and even made to disappear entirely by the patient opening his mouth widely. During all of this time the frequency and the depth of the respiration had not changed. "From these facts I conclude that the tubal soufflé is not the result of the mechanical passage of air thru the bronchi, but is the resounding of a sound produced in the throat."—Beau. Beau then experimented on cavernous respiration, on consumptives, and decided that the cavernous soufflé was also caused by respiratory sound in the throat. Beau concluded that the guttural sound was the result of the breaking of the column of inhaled air and exhaled air against the anterior and posterior surface of the veil of the palate.

The following are the conclusions that Beau drew from his experiments: 1. When the throat sound is suspended, the vesicular, bronchial, tracheal and cavernous soufflé no longer exist.

2. If one suspends the guttural sound in one of the two respiratory movements, one hears no tracheal or vesicular sound in that movement not accompanied by the sound of the throat.

3. A few sheets of paper were rolled into the form of a tube and placed in the patient's mouth. They then took a deep breath and held it and the operator blew into the tube, and if the glottis remained open, he obtained, on auscultation, tracheal and vesicular sounds, as when the respiration was in progress. In 1856 Beau's view of his fundamental experiments were unchanged, and he emphasized with greater force, the point, that if respiration is continued for some time in such a way that one phase is audible and the other inaudible over the chest, air must necessarily have been admitted or expelled during the noiseless phase. Beau's work received little recognition.

The orifice of the glottis is mobile and when the lumen is normal a distinct sound is produced in respiration, which increases with the narrowing of the orifice. The orifice of the glottis presents an obstacle to the passage of the air and this produces the glottic soufflé. Beau was ignorant of the fact that the vocal cords, in life, overhang the cavity of the larynx and are ready, when not under willed tension, to flutter with the least current of air. Stoke's belief, that shallow breathing is necessary condition for suspension of the respiratory sound is unfounded. Beau said: "In asthma, inspiration is brusque, silent and gives no guttural sound; to make it the patient throws back the head and opens the mouth wide. Expiration, on the contrary, is long and noisy. One hears in inspiration no vesicular, bronchial, or tracheal soufflé, although the thorax rises. There is a spasm of the inspiratory muscles which dilates the respiratory passages. The air encounters no obstacle, therefore, we get no sound and we know that the vocal cords are not in their normal position in this condition.

The various dilating mechanisms of the upper air passages are linked together in a system. The dilatation of the rima glottidis is the most important of all devices for the removal of impediments to the passage of air into the lungs. When the person seeks to separate widely the vocal cords, he imitates the paroxysmal dilatation of extreme dyspnoea. In bringing into play one part of the dilating mechanism, one almost necessarily sets the whole process into automatic operation. With these muscular contractions is instinctively combined a mighty inhalation of air, so the lung may become overfilled.

Dr. Bushnell found that he could eliminate the harsher sounds and supposed the remaining sounds originated within the lung, but further work showed that the vesicular murmur could also be abolished when the cords were pressed against the walls of the larynx with great effort. Sound originating in the larynx and heard in the lung is carried down through the trachio-bronchial tube to the air cells; but the ear applied to the chest does not hear tracheal breathing, if the lung parenchyma is normal; the air cells do not permit all manner of sounds to pass through them. The pitch of the vesicular murmur and the pitch of chest note on percussion are the same and both are approximately of the pitch of the fundamental tone of the thorax as a resonator.

Laryngeal sound is a noise made up of a large number of individual tones and tones are selected by the various resonators, which are of, or near to their fundamental tones. Sound may be produced in the upper air passages by vibrations other than those of the vocal cords, which is difficult to distinguish from true respiratory sounds.

The fact is definitely settled that the sound of expiration as heard over the lung, is conducted from the larynx.

#### GROWTH OF SANATORIUM MOVEMENT.— Editorial, *Journal of Outdoor Life*, July, 1923.

In 1904 there were in the United States 115 sanatoria, with less than 8,000 beds for tuberculosis. Today there are 655 sanatoria with over 66,000 beds. In 1904 there were three State Sanatoria as contrasted with 58 today.

In 1904 there were practically no county hospitals or sanatoria, and relatively few municipal institutions of this character, excluding wards in alms houses, and similar institutions, most of

which have since been discarded. Today there are over 250 county and municipal hospitals for tuberculosis, with 22,000 beds. It is estimated that the present institutional equipment in the United States is worth over \$165,000,000, and that the annual cost of maintenance is over \$30,000,000.

This tremendous growth is due, in a large degree, to the educational campaign carried on by the National, State and Local Tuberculosis Associations. These organizations have been maintained, chiefly by the sale of Christmas Seals, receipts from which have amounted to \$25,000,000 in the last fifteen years.

#### X-RAY DIAGNOSIS OF PULMONARY TUBERCULOSIS.—Harry Lee Barnes, American Review of Tuberculosis, May, 1923.

Material for study, 1,111 patients with complete clinical and x-ray records.

The physical examinations of the chest were conducted without any knowledge of the x-ray. Interpretation was made without the identity of the patient being known. Stereographic films were made in those cases without positive sputum, and flat pictures in all positive sputum cases. The x-ray interpretations were based on the findings of specks, streaks, haziness, cloudiness and mottling. In this series of cases there were 592 with positive sputum.

In diagnosing negative sputum cases suspected of tuberculosis, one seeks by physical and x-ray examination to find the evidence of condensation of lung tissue which will fit in with the history of past and present symptoms, and by careful balancing of probabilities give us a diagnosis which, though lacking the accuracy of necropsy, is nevertheless the best that can be done for the living patient.

Of 592 positive sputum cases only five were read as negative to the x-ray, and re-reading of films showed that four of the five had slight changes at the apex. Of 592 positive sputum cases, x-ray evidence of involvement of the second apex, unrevealed by physical examination, was shown in six per cent. Of 592 positive sputum cases, in 380 or 64 per cent, the x-ray evidence of disease was more extensive than the physical signs. In 36 or 6 per cent the physical signs were more extensive, and in 176 or 30 per cent the amount of lung involvement was about the same as indicated by the two methods.

Of 310 apices of negative sputum patients, in which dullness or moist rales had not been found, 40 per cent showed abnormal x-ray densities. Of 728 apices of negative sputum patients showing dullness or moist rales, 36 per cent were negative to the x-ray. In negative sputum cases both dullness and rales were found in 40 per cent of the apices showing specks by x-ray. In 39 per cent of apices showing streaks and in 30 per cent of apices showing haziness.

#### THE SUBSEQUENT HISTORY OF CHILDREN DISCHARGED FROM TUBERCULOSIS SANATORIA.—Arthur T. Laird, American Review of Tuberculosis, May, 1923.

This study includes 163 children admitted to the Nopeming Sanatorium, all being under 12 years of age, with an average stay in the sanatorium of about ten months. Reports from other

institutions are cited with varying results.

The most interesting of these reports is that of the Grancher Institute, founded in France about eighteen years ago. Healthy children, usually at least three years of age, are taken from tuberculous families and placed in the country in the families of healthy country people, where they remain to beyond the age of thirteen years. More than two thousand children have passed through the hands of this institute, and only seven cases of tuberculosis have developed among them, and four of these recovered.

The universal infection of these children in direct contact with open tuberculosis, is emphasized and consequently some provision is made for the protection of those children not already clinically tuberculous, and sanatorium management for those showing evidence of disease. For the latter extended sanatorium management with systematic follow up is advised. For the former the preventorium is recommended where children not needing definite medical management may be placed under proper hygienic surroundings, where they may have all the safeguards thrown about them without the expensive care of the sanatorium, and thus free the sanatorium beds for those in need of treatment.

This study would indicate that the prognosis (as is generally believed) is better after five years of age, and the results obtained are better in proportion to the length of time spent in the sanatorium. These figures show that the results, after five years of age, are about as good as those obtained in adults.

Under conclusions the following points are stressed:

1. The need of standard methods of obtaining data.
2. More efficient follow up systems, not only for the purpose of making statistics, but in the interests of the children against the necessity of prolonged supervision.
3. The necessity of adequate provisions for the continuation of the child's education where prolonged residence in an institution is necessary.
4. Children from families in which there has been an open case of tuberculosis, showed in this series a slightly larger percentage alive or well at last report, than the entire group included in the study.
5. Children not showing definite evidence of active tuberculosis upon discharge from a sanatorium, apparently do not develop the disease later more frequently than other children.

#### GENERAL SURGERY

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#### OLD MASTERS

Hippocrates, (460-370 B. C.) instituted for the first time a careful, systematic and painstaking examination of the patient's condition, including facial appearance, pulse, temperature, respirations, excreta, sputum, and localized pains and movements of the body.

He divided diseases into acute and chronic, and was the first to describe healing by first intention. Dislocations of the shoulder he said "are rarely inwards or outwards, but chiefly downwards," and

his methods of reduction are practically those of modern times.

He was particularly strong in his account of congenital dislocations, and in reducing and bandaging fractions. He was the first to notice that Pott's disease of the spine often co-exists with tubercle of the lung, and was familiar with club-foot. He was familiar with fracture of the clavicle and dislocation of its acromial end and knew how to treat these conditions.

In the treatment of wounds, he said they should never be irrigated except with clean water or wine, the dry state being nearest to the healthy and the aseptic advantages of extreme dryness were utilized. He recognized that rest and immobilization are of capital importance. He described the symptoms of suppuration, and if water was used for irrigation it had to be very clean or boiled, and the hands and nails of the operator were to be cleansed.

In the operating room he laid great stress upon good illumination, posture of the patient and capable assistants.

He mentions trephining and paracnetisis but does not mention amputations. He noted that a wound of the left temporal region caused convulsions of the right side and vice versa. Hippocrates was the first to note the succussion sound obtained by shaking the patient on a rigid seat, the ear being applied to the chest.

G. A. WALL, M. D., F. A. C. S.

#### THE RELATION BETWEEN OBLIQUE INGUINAL HERNIA AND THE WORKMEN'S COMPENSATION LAW—Wainwright, J. M.

Archives of Surgery, Vol. VI, No. 2, Pp. 605.

The author quoting Berk who says "there is not an individual who having a hernia, at the moment when he noticed its existence, did not at once, attribute it to accidental cause, most often to an effort."

Many surgeons believe that practically no hernia is traumatic and should not be compensated, while labor bodies and social leaders believe just the opposite. The author believes that the present legal and lay attitude is unsound, unscientific and at variance with firmly established medical facts. A great deal of this confusion is due to the use of the word rupture as synonymous with hernia.

A rupture is a tear and a tear can only be caused by an accident. The author quoting various authorities shows that oblique inguinal hernias are dependent on the presence of a congenital sac. Russell never met with a case on the operating table that he had any reason to regard as a case of acquired hernia. He thinks that there is no difference between the hernia of adult life and that of childhood. The author feels that the sacular theory of hernia is now well launched, and goes on to give an extensive review of American, British, French and Italian literature on the etiology of hernia.

The views of the various authors quoted seems to be that a true traumatic hernia is a rare finding. The most of them feel that when the trauma occurred it only made an existing hernia apparent. That great majority of hernias which are referred to an accident have as the original cause a predisposition, created by a weakness of the wall or by a congenital defect, which has only hastened the appearance, or made manifest the existence of a hernia which existed unperceived.

Most authorities agree that hernia must give immediate evidence, by violent pain, shock and partial collapse, while one should find in the groin a small lump irreducible, in which each movement exaggerates the suffering, all this occurring within 24 hours accompanied by ecchymosis and edema.

Coley states that in 50,000 cases at the Hospital for Ruptured and Crippled there were only four in which direct trauma was a probable cause, and even in those the proof was not absolute.

He thinks it doubtful if traumatism alone without an open funicular process in the canal can ever produce a hernia. One case in 10,000, according to Morgan, would be a liberal estimate for hernia the result of trauma. If a hernia making its first appearance after an injury becomes strangulated it may be deemed of traumatic origin. Outten, who has had a large experience, feels that we should doubt the occurrence of traumatic hernia in every case. Medicolegally, the existence of traumatic hernia has not been proven. Moschowitz says, "that traumatic hernia does not exist." Plummer has seen many severe injuries of the abdomen, but never has seen an inguinal hernia follow in injury, even in the severest cases. Moorhead says "no single isolated act of violence causes a hernia, unless the overlaying parts have been lacerated."

The author lays stress on the differentiation between an old and a recent hernia at the time of operation. One error that is frequently made is to consider that a small thin nonadherent and empty sac is a recent one. The longer the delicate type of sac, the more certain it is to be congenital and if adherent to the tunica vaginalis or connected with it, it is certainly congenital. This paper is so long covering every phase of hernia, that we would recommend that the original be obtained and read, since the question of hernia and the compensation law is of paramount importance to the profession today.

#### INTESTINAL RUPTURE FROM EXTERNAL TRAUMA WITHOUT EXTRA-ABDOMINAL EVIDENCE.—Vance, Charles A.

S. M. J. Vol. XVI. Number 5, page 380.

The author calls attention to the fact which is apparently forgotten or ignored by the average general practitioner of medicine, that intestinal rupture may occur from externally applied trauma without the production of sufficient surface evidence to suggest serious visceral lesion.

That patients seen within 30 hours will emphasize the necessity for earlier surgical interference, irrespective of any local or general symptoms, in cases of external trauma, and he justly criticises what he calls "the ancient and pernicious textbook dictum" that one should await the appearance of symptoms, definitely indicating visceral lesion before resorting to surgical intervention.

Citing from Curtis in 166 cases collected 30 years ago not a single one was subjected to operation and the mortality was 100 per cent. He gives Curtis' conclusions which were to the effect, that treatment of abdominal contusions should be expectant, in the early stages and that exploratory laparotomy in this stage is inadmissible, and when the diagnosis is in doubt, not until the symptoms of uncontrollable hemorrhage or serious visceral injury appear is celiotomy indicated."

According to Sherk, the mortality in 257 cases according to the time which elapsed between injury and operation was as follows:

- 64 cases operated within 6 hours, 48 recovered and 15 died.  
 36 cases operated within 12 hours, 24 recovered and 12 died.  
 29 cases operated within 18 hours, 13 recovered and 14 died.

This shows a definite increase in the mortality rate for every 6 hours delay in operating.

The death rate of early operations average less than one-third that of late operations. Pain shock and rigidity were present early in a large majority of cases. The author quoted feels differently than does Curtis, and says that all abdominal injuries should be kept under close observation, after a careful examination, no matter how slight the symptoms may be, if referred to the abdomen, we should consider the question of visceral injury. That the degree of violence bears no relationship to the extent of the injury. A most thorough investigation of the details of the accident should be made. He thinks that an active peristalsis is encouraging after an abdominal injury: Pain is important, only that it calls attention to the injury. Using what Murphy calls "a keen surgical sense" is what is needed by the doctor who first sees the patient. The author insists that an accurate history of the accident be obtained in every instance, as to the nature of the traumatizing agent the attitude of the patient when injured, probable force and direction of the violence and the time relation as to food ingestion. There are no pathognomic signs in the early stages by which visceral injury may be certainly recognized, and early diagnosis is often impossible.

He thinks that it is the imperative duty of the surgeon to intervene provided there exists even presumptive evidence of internal damage, for procrastination means usually a fatal issue and exploratory operation is practically devoid of risk. Under expectant treatment with visceral injury the mortality is 100 per cent. He concludes by stating that the earlier operative treatment is instituted in these cases the greater possibility of saving life and the individual is entitled to this consideration.

#### A METHOD OF DETERMINING THE QUESTION OF DRAINAGE IN INTRA-ABDOMINAL INFECTIONS.—Willensky, A. O. and Berg, Benj. N.

*Annals of Surgery*, Vol. LXXVII, No. 5.

The question of drainage is acute abdominal cases is of paramount importance for in many cases the local findings make the institution of drainage imperative, such as perforative lesions associated with marked peritoneal contamination, frank abscesses and oozing surfaces.

But the question always arises in borderline cases and the old dictum "when in doubt, drain," still holds good in the mind of these authors. They submit what they term a rapid method to determine the decision as to primary closure or drainage in borderline cases.

Smears are made directly from the involved viscus and from any peritoneal exudates which may be present at the time of operation. By rapid staining the presence or absence of organisms is microscopically determined, and the degree and kind of infection present is obtained. This will be an index as to the proper procedure.

#### ARE YOU PREPARED FOR OPERATIVE WORK?

**Note:** The following was clipped from the circular of an institute for surgery and it seemed so apropos that it is reproduced.

If, during an operation for strangulated hernia, it was absolutely necessary for you to resect a part of the intestine, could you do it accurately, scientifically and quickly, either by an end to end anastomosis or by a lateral one? Can you quickly and definitely decide which is the approximate and distal portions of any part of the intestine? Do you know the jejunum from the ileum and its approximate distance from the ligament of Treitz? Can you quickly locate the ligament of Treitz, the right kidney pouch? Do you know how to do a posterior gastroenterostomy or an anterior gastroenterostomy or a resection of the stomach? These few questions should be fully considered since they are so very important, and during an abdominal operation any one of these procedures may arise.

#### CURRENT COMMENT

By The Editor,  
 Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, whatever or wherever it may be. Contributions are invited from our members.

**TWENTY-EIGHT PER CENT** of Oklahoma's illiterate are housed, (exist) in Northeastern Oklahoma, according to Miss Nell Hunt, county superintendent of Muskogee County. Miss Hunt further says that in Oklahoma 56,000 people can neither read or write, that this condition is due solely to the absence of the "Little Red School House." Twenty-six hundred people in Muskogee County can neither read or write, a high percentage for a supposedly advanced county. The solution of this problem is not so much more school houses, but a better class of teachers. Poor teachers are a drag upon the body politic, will surely reflect their poorness in the coming generation while the better class of teachers will produce a higher grade of citizenship. We should demand the best only and pay them adequate salaries. The salaries now paid Oklahoma teachers would be scorned by many ignorant garage workers. It is amazing to one who knew how badly conditions once were to make a visit to some of the rural districts as they now are. Where formerly entire families were steeped in ignorance, the elders are still to be found generally in that state, but what an amazing change has occurred as to the younger generation. It is with pride that one realizes that the young Indians, children of the full-blood, can now read and interpret English correctly and write in a beautiful hand. All this comes from a few years of properly conducted study. No one thing can do more for our State than the improvement and maintainence at the highest level of efficiency of our public school system. That is one expense the taxpayer, we believe, will gladly stand for.

## MEDICAL SOCIETY REMAINS SILENT ON PROHIBITION

### Four Resolutions on Subject Killed by Association

The American Medical Association convention declined to go on record regarding prohibition. It killed four resolutions directed at provision of the Volstead act.

The house of delegates, representative body of the organization of 90,000 doctors, voted overwhelmingly to table the resolutions, which were offered by Doctors T. C. Chalmers, Forest Hills, N. Y., and V. G. Vecki, San Francisco.

Approval, however, was given to another resolution, also by Dr. Chalmers, recommending that pharmacists be permitted to sell upon prescription, bottles of bonded whiskey in sizes appropriate for medicinal purposes, to be dispensed in the original bottles.

Dr. William Allen Puzey, dermatologist and professor of skin diseases in the University of Illinois, medical college, was elected president, receiving four more votes than Dr. William D. Haggard, Nashville, Tenn., the only other candidate.

Chicago was chosen as the 1924 convention place. Olin West and Austin A. Hayden, both of Chicago, were re-elected secretary and treasurer, respectively. Dr. F. C. Warnshuis, Grand Rapids, Mich., was re-elected speaker of the house of delegates. Members of the board of trustees selected are Doctors J. H. Upham, Ohio; Charles Richardson, District of Columbia, and W. T. Williamson, Portland, Oregon.—Okla. City Times, June 29, 1923.

ABRAMS "Ossiloclast" is again named as a thing of dishonesty and graft in an article in the *Dearborn Independent* (June 30) by Robert Morgan. The article professes to show that the "ossiloclast" contains not an atom of electricity anywhere, anytime. This being the second and similar onslaught of this character against Dr. Abram's machine, we are wondering why Abrams does not "throw his hat into the ring," via the usual route which means a suit for damages against the *Independent*. Henry Ford is certainly able to pay the bill, regardless of its size.

"SIX PER CENTS" are the things Jack Dempsey is advised to scrutinize closely with a view to investment. This advice coming from the *Kansas City Star* is coupled with the idea that Jack, like Napoleon, may face the day with a "punch" all right, but without the ability to deliver it. This came from the condition of Dempsey, the man with a "punch," but without ability to deliver it, at times to the dancing Gibbons. The *Star* seems to think the day will come when some one will show up who has the ability to stay out of Dempsey's way altogether, at the same time conserving a "punch" which will place the fighter, in the status they all eventually reach, among the "has beens."

THE LEVIATHAN, the "Levi Nathan" as it is facetiously called by some one wishing to call attention to the fact that Mr. Lasker, the man above all others who may invade Mr. Harding's sleeping chamber when he wills, and while men of greatness stand about rubbing their hands and wondering how much longer they will have to wait; Mr. Lasker's Jewish derivation; will demand that the taxpayers of the Nation expend upward of \$90,000.00 for vegetables, ginger ale and fine cigarettes (it is not exactly set forth as to

what purpose the ginger ale will be put to, though it is a known fact that by its lonely it is a most unattractive drink). While the Kansas, Texas, Oklahoma and Illinois farmer by the sweat of their brows struggle through their wheat harvest, paying wages impossibly high to harvest wheat at a price which is impossibly low, and surely in this condition by reason of the inactivity, delay and slothfulness of Mr. Harding's administration; Mr. Lasker will be gently wafted over the cooling breezes of the Atlantic, surrounded by the elite and cream of the land, even the enlivening presence of a great band to produce soothing music to his ear has not been overlooked. But, who cares? Have we not the struggling farmer to meet the bill? Suppose Mr. Lasker, in his laudable effort to boost himself further upward in the scale of public and executive favor, does spend a few hundreds of thousands cruising about the Atlantic and nearby waters, what of that? Have we not the farmer, the artisan, the typographer, the laborer in all walks of life to dig down in his pocket and foot the bill. Shame on you, you ungrateful critic. The nerve you have to wish that your Chief Executive's Jewish assistant stay at home and face the impending coal shortage, and the shortages of many other types we are sure to be confronted with.

SPEAKING OF LASKER. Another strange story is being bruited about. This time it again has to do with spending the taxpayers' money, but not on so many as the Leviathan carried on its broad decks, not on hundreds, but on even less than a dozen, to be exact, just ten of the favored mortals were present at the bounteous board, Mr. Lasker, of course, being one of them. The favors and food alone, including the flowers, cost an even one hundred dollars per person. Just think of it, wasting such impossible amounts upon impossible people. The only object of this meeting, it seems, was to have the "gang" foregather to hear Mr. Harding tell Mr. Lasker how well he had "botched up" the shipping board job and in turn to have Mr. Lasker tell Mr. Harding how well he looked in white duck with Laddie Boy trailing in the rear. Something more certain to give the working farmer and city struggler a thought or two to gum over. We can imagine their conclusions without much effort.

## FRENCH AIR ACTIVITY

" . . . What else can Mr. Baldwin's statement in Parliament mean? British air power must include a home-defense air force of sufficient strength adequately to prepare us against attack by the strongest air force within striking distance of this country." "Mr. Baldwin's announced intention to increase the home defense air force from eighteen to fifty-two squadrons, almost tripling it, is a direct challenge to France. It is directed against no other power. France recognizes that and is replying in kind." "We are back in the poisonous atmosphere that made the European war inevitable." "Germany is disarmed; Austria is disarmed; Hungary and Bulgaria are partially disarmed; Russia has fewer soldiers than before the war—but Europe has more men under arms today that she had when the Great War found her an armed camp in 1914. She is still an armed camp. France, unable to pay interest on her own debts, unable even to pay the contractors for reconstruction in her destroyed provinces, France, which pleads despairingly for more reparations, lends 400,000,000 francs to Poland and 100,000,000 to Rumania, and main-

tains a military mission in Czecho-Slovakia, and accordingly those young powers born of the war to end the war, maintain armies greater even than those their imperial predecessors." "We ourselves have a larger army than before the war, and are constantly being urged still further to increase it."—The Nation.

Yes, indeed, the above is true and more. Every one of these little, helpless, bankrupt, newly created Nations are entering upon ambitious expenditures for military prowess never before dreamed of as possibilities. At the same time they are whining to be let off on the payment of their debts or not making any pretense at all toward paying them. France is assuming exactly that attitude, while England is manfully paying hers and states she will continue until she does pay all, which places England in the highest niche of self-respect of other peoples and nations.

What we, the United States should do, and quickly, is to advise France, Poland, Rumania and all others pursuing such tactics that we are tired of paying and will pay no more money to save the starving of a nation, which, while they neglect the starving children at their very door, attempt to negotiate immense loans for military waste. This is exactly the status of Poland, for instance, its army has no peer today in all Europe, when it comes to dress and the externals of military vanity. Yet Poland is worse than bankrupt and recklessly plunges onward toward financial destruction. They will go to any length to dress up their army, but to no length to feed their starving infants. Now the money, it should be clearly kept in mind, for all this extravagance comes from France, but France is unable to pay us a cent upon its huge indebtedness to us. We should at once advise France through our Secretary for Foreign Affairs that we will not longer consider it good form to see France encouraging such waste on Poland's part, unless some material attempt is made to reduce France's indebtedness to us at the same time. Certainly, if this state of affairs were pressing brought home to those who give large contributions to relieve distress among the poor of Southern and Eastern Europe a different line of action would at once be observed.—The Editor.

OKLAHOMA UNIVERSITY "Extension Department loses," according to press dispatches, due to failure of the legislature to match Federal appropriations available under those conditions only. Well, what of it? Are we not spending a few thousand "looking" for Fred Dennis and a few thousand elsewhere to placate the Reds and their schemes?

"MOST ASSININE LEGISLATION is to Health, Medical Licensure, Education," is the way most of our medical law efforts are described editorially by the Technisch, (Okla.) Democrat. "Rarely do physicians of sound judgment seek election to state legislatures. Or if they do, it is a half-hearted manner and without adequate support from the other members of their own profession." The matter could not have been more curtly or briefly stated than in the above summing up. That is exactly the case. As a rule, the physicians deliberately seeking these places are unworthy, while those who could and should occupy them through their worthiness, will not consent to accept them. The end result is that we have the most amazing spectacles in the way of public health legislation, the most impossible inroads upon the rights, collective and individual of the people as a whole. The matter will never end

either until we have changed our entire attitude towards these matters and send to the legislature, not our weakness but our strength.

"WHILE PATRIOTIC GERMANS were burying with honor the remains of that great patriot, Quentin Roosevelt, behind their lines Mr. Edsall Ford was entertaining a 20 plate dinner party on Hog Island," said Mr. Thompson, past Commander Pennsylvania American Legion. We did not believe it, so we asked Mr. Ford's Secretary to enlighten us, if he would. He did not. Instead, he came back with this lame statement: "He (Mr. Ford) has preferred to ignore criticism such as you mention having heard, but because your letter appears to be a voluntary expression of good will, I wish to acknowledge it in his behalf, and thank you." Quite a cute reply, but it gets us nowhere. Mr. Ford could have instructed him to say pointedly that the statement was untrue, or true, as the case may have been. As it is, we are now in an uncertain state of mind, very much inclined to believe this Thompson person's statement, and to think of Mr. Ford as evasive and side-stepping the issue.

### THE NON-PRODUCER

We have watched him with an appraising eye, often with a predetermined hostile attitude, the non-producer. We refer to the man who lives about apparently neither weaving or spinning, but certainly reaping, the other fellow's crops always. He is usually a mahogany topper, that is, his office furniture is of that character, and always, of course, paid for by the other fellow, never by his own sweat and brawn. He is particularly obnoxious as a member of the multitudinous soliciting committees, where he presents himself in the attitude of pleading and suave smoothness, for the other fellow, incidentally, often leaving a few tracts indicating his own line of special endeavor telling how he can sell you the very finest, non-contestable policy, cheaper than any other company, and with many other attractive features. He forgets the general attitude of the average mind to him self, forgets that he is neither a weaver or spinner, and proceeds to lay down a line of action telling the other fellow how much he should give to the deserving charity under consideration, considerably forgetting for the moment that the fellow in question may owe all he has in his pocket, all he may hope to make and save for months, to some other fellow, thus giving away every time he gives away a cent, money belonging to the other fellow, not himself. Yet impertinently goes along our non-producer, held up in the air, much sought after as an after dinner speaker, putting behind him his real status, which must, he be endowed with average intelligence, come to the fore occasionally once in a while to plague him by reminding him what he really is and really amounts to. He really waves often indignant if his squirming victim asserts his constitutional rights by telling him he proposes not to give a darn cent to the matter in hand, that his money, for the nonce, belongs to some other fellow. That phases him not, grandiloquently he comes and goes his way, puffing at a costly Havana, paid for by the other fellow, curling smoke towards the ceiling he is unable to see why a busy man, trying to get away from debt and entanglement has not time to waste upon his worthy self and mission. The non-producer. Like him? We do not.—Editor.

### WHAT WOULD YOU DO?

How do you act in emergency? Go to pieces, or simply throw your clutch into high and speed ahead?

Dr. Frank McGowan, New York surgeon, breaks his right arm when a touring car smashes into the ambulance in which he is rushing to an emergency case. What would you have done? Turned the job over to another doctor? Not McGowan. He and his assistant set his arm, bandaged it in splints. Inside ten minutes the ambulance clangs ahead. McGowan apologizing to his patient for arriving late.

Interesting example of how we can master crucial problems if we don't throw up the sponge and quit.—Muskogee Times-Democrat, July 6, 1923.

Yes, every once in a while we meet with the "subject," usually pointed out with awe and wonderment about bar-rooms, who actually took time by the forelock, operated upon himself for a broken arm—not by a jugful, he removed his own appendix or drained an infected (?) gall-bladder. We fail to see either heroism or common sense in such freakishness. On the contrary, we do see an obstinate, dangerous, illy balanced man, approaching without trepidation, that which skilled surgeons approach with a great deal of respect. Perhaps this New York genius, lots of them are built that way, knew there was no other man in the country who could do it as well as himself.

### HOW TO KEEP SICK

By Dr. Frank Crane

Dr. C. F. Wetche has published an interesting little pamphlet on how to get sick, how to keep sick and how to make others sick.

This is welcome information and fills a long felt want.

Among the other suggestions made by Dr. Wetche, I note that the leading one is "Think sickness." That is, if you want to have any particular diseases, concentrate your mind upon it. There are times when a disease is very handy. When you want to dominate your husband it is often very effective to use the tyranny of tears. If you have worked up a lather of self-pity and want your wife's sympathy, it will be much easier if you can come home, fall limp into a chair and roll yours eyes.

Hence, if you wish to have a bad spell, say to yourself, "Day by day in every way I am feeling worse and worse."

Another valuable piece of advice is—Talk sickness.

It is well known that our words affect our opinions by a sort of reaction. Therefore, make it a point to talk about every sort of pain, itch, megrim or gripe that you may have had or have had or expect to have.

Talking sickness is easy and pleasant. It gets you sympathy and attention. It is the shortest road to being conspicuous.

Other pertinent hints are:

No work of any kind. Work greatly interferes with the progress of disease and sometimes even stops it. People who work right along do not seem to find time to be sick.

Eat as much as possible. Always eat a little more than you want. Particularly eat plenty of pastry and meat. These foods produce unhealthy fat and are full of various poisons which will be

of great value in promoting your ailments.

Always drink ice water after meals so as to chill your stomach and prevent digestion.

When traveling, drink strange waters freely. This gives you a fine chance to get typhoid.

Don't chew your food. Bolt it. Wash it down with plenty of liquids. This saves times and is a good health preventive.

Don't think about what you eat. Eat what you like. Comfort yourself with the saying that what is one man's food is another man's poison and that nobody knows anything about diet anyway. Scorn all information regarding calories, vitamins and such nonsense.

Eat plenty of candy and drink quantities of soda water and ginger ale and the like. This will help you get rid of your teeth and also assist in securing diabetes.

Read the patent medicine advertisements. Try all new patent medicines. Consult quacks freely.

Never visit a regular physician when you are well in order to find out how to keep from being sick. Wait till you are very ill and then call him.

Worry as much as possible, read plenty of gloom literature and don't forget that everybody who is cheerful is a hypocrite.—Physical Culture.

**THE DEARBORN INDEPENDENT**, Henry Ford's Weekly, quotes Admiral William S. Sims, retired, as follows: "The appointment of an officer who is not a graduate of the war college to be Commander-in-Chief of the great United States fleet, is a crime against the people of this country. More than half the officers given preference in the transfers recently announced to take effect this summer are not graduates of the war college." The war college gives the officers training in the application of those doctrines which enable widely separated elements of a great fleet to co-operate as a single team and which enable the commander to make sound tactical decisions in time—that is, before the enemy can seize the initiative.

"**DRAFTING HENRY FORD**" is the manner by which some of his satellites would lead us to believe that Henry is very reluctant to have the Democratic nomination thrust upon him. They would actually have the guileless reader believe that Henry has some of the characteristics attributed to one late Julius Caesar, but we cannot see it that way at all, on the contrary, it seems to us that it is barely possible that should we nominate the wizard like manufacturer of "Lizzies" we might wake up too late to discover that our nominee had actually been laughed and ridiculed out of any sort of approach even to the presidential chair. It also seems to us that there is a very considerable amount of hysteria in all this talk of "Ford for President." Mr. Ford has never done anything to cause the American people to think seriously of conferring this great honor upon him. On the contrary, he has done and is responsible for some very bizarre, to us unexplainable things. For instance, his trip in the Good Ship Oscar II, was as badly timed, as badly misplaced, and useless and needless a trip ever made across the ocean by any man living or dead, so far as the expectation of serious end results were to be looked for. It is said that he had not the slightest assurance or warrant from anyone in authoritative position to know that he would be received at all, and if received, that he would not be politely, figuratively speaking, kicked down the back-stairs. The latter is more than seriously possible for the then German War Lord was cer-

tainly in no humor to be told "where to head in," least of all by any American. The trip has and bears more of the ear marks of some of the old crusades, predestined and foredoomed to failure, than to any other epochal event, if such may be honored with the rank of epochal. Mr. Ford is a good business man, there all analogy to the rights of the presidency end. He seems to have neither training or conception of many of the great principles or the finer things which go to make, all added into one flexible mass, what is termed a "good president." He has none of the finer attributes of political finesse, is just as likely to bungle into the parlor in his pajamas, giving out a mouthy statement of what "I would do to save the situation," as to be found following a dignified, proper course. He makes a good car, can get more out of a dollar than any other known labor executive, but there ends his fitness for the Presidency, so we shall not have him for President. It is settled, we have decided it.—Editor.

**AS TO MR. McADOO** and others "who would be" president. Mr. McAdoo is all that is claimed for Mr. Ford, plus a good deal more. He, too, is an executive of no mean proportions, knows how to use a dollar, and has great living monuments all about us testifying to his great ability as organizer and builder of things, then the story is not ended at all. He has many political capabilities and experiences far above the high class politician and expert of the American world. He has an eye and thought and finger for every real problem affecting not only the America's but he knows well the intricate and constantly changing European political and economic situation as well. Anatolia and Mesopotamia are not strangers to this gentleman, while to some of his supposed opponents they are as Plutonian darkness indeed.

**DOCTORS AS SPORTSMEN?** You did not think so? Well just revise your opinion for they are "Sports" in the true sense of the word. A recent casual inspection of one page, advertising dogs, the real article in the canine species shows that of nineteen advertisers of the fine-haired animal, six of them were doctors. A recent issue of a National sporting journal contains as its piece de resistance, an article from Dr. Richard L. Sutton, Kansas City. His colleague, Dr. E. H. Skinner, is also a very well known out-doors man. Dr. Millington Smith, Oklahoma City, and Dr. G. H. Butler, Tulsa, like the outdoors so well that each year sees them twice or more hieing to the hills where rise the bass to the lure or whirrs the brown-breasted bob-white. Well, it does them good, nothing does quite so much good to the tired town dweller as a few days or weeks outdoors. Camps, with a little forethought, may be kept immaculately clean and it follows, fly-free. Other pests of insect life may be easily controlled by attention to local conditions and the proper use of screens. One word as to mosquitoes, as having bearing on the situation. The popular fallacy that links them with the South is indeed a fallacy, for the writer believes the largest mosquitoes of his experience were encountered just about timber line, and where the water was all from melting snow a few rods away. So, they are anopheles variety.—Editor.

#### THE LAZY OSAGE

Mr. Ford's Dearborn Independent (June 16) has this to say about the celebrated Oklahoma Loafer, the Osage Indian:

"While the Osage Indians of Oklahoma are idly wallowing in the inherited wealth of oil lands, the

Blackfeet Tribe of Glacier National Park today has achieved a reputation for thrift that brings to its 3,000 members high compliments from the Indian Department. So much wheat was raised last year by these Indians that the Government had to build a \$65,000 grist mill to grind their grain for them. This is the first time in the history of United States civilization of the Indian that a tribe has become self-supporting through its own thrift."

It has been the contention of your editor and many other Oklahoma observers over a term of years that the large appropriations annually shoveled out to the Osage tribe for farcial, blundering display and silly waste should end. Congress has before this taken the authority to legislate on other such matters, certainly it has a right by proper enactment to stop the foolish, laughable waste now the talk and scandal of a continent going on by reason of the antics of the ignorant, unwashed Osage with a pocket full of money for which he never worked and therefore has no idea the value of. Two things are utter strangers to these loafers: They are work and baths.

#### WHAT EVERYONE SHOULD READ

Is the title of an article in the American Magazine, by H. G. Wells, than whom a better advisor does not exist. So valuable is the advice that the Scientific American notes it as follows:

"Wells . . . . has a kind word for us which we cannot resist passing on to you. The great British historian and novelist says, in part:

Everyone, I think, should read such a weekly newspaper as *Nature*, of London, within its range the most honest and wonderful newspaper in the world, or the *Scientific American* to keep in touch with the ever-advancing boundaries of human knowledge and achievement. If there are people who cannot read such periodicals, then it is high time the schools that produce such people were looked into and shaken up to a higher level of efficiency. When I write of what everyone should read in a modern community I have, of course, to assume that the schools of that community have prepared them for their reading."

**UNION LABOR:** The Oklahoma City Trades and Labor Council have "demanded" the resignation or "firing" at the hands of the Governor, of Honorable Ben F. Lafayette, one of the State's best known and most honorable men, and Mrs. Pat Nagle, from the State Board of Affairs, all because the two recalcitrants failed and refused to award all of the State's printing to Union Shops. Well, these gentlemen might just as well get it out of their systems. The State should have its printing done by the lowest competent bidder, to all others the statement "no others need apply" should be hung out, and hung out and practiced in good faith. We take it that is exactly what Mr. Lafayette and Mrs. Nagle have undertaken to do, hence the growling at them. All we think about it is that if the Governor harkens and acts on the suggestion that he will have harder sledding than ever if he or any of his machine again come up for reelection. The slogan of all our officers should be "Oklahoma First."

**GLOOM, DEEP SEATED** is the only way the present attitude of Luther Burbank may be described. Speaking of his pet project "Sebastopol," where his acts of wizardry have been brought to successful termination, in the Dearborn Independent, he has this to say:

"I am seventy-four years old. My strength is

good for my age, but it is not what it used to be. I sold part of the Sebastopol experiment farm because I could no longer operate it. The remainder will have to be sold for the same reason. On the thirteen acres that are left at Sebastopol are 2,000 varieties of cherries, 1,000 varieties of plums, sixty or seventy kinds of selected chestnuts, between 300 and 500 varieties of pears and fifty or sixty varieties of quinces. There is also a walnut tree that, for many years, has produced each year \$1,000 worth of walnuts. This tree is so superior to anything else in existence that I was once requested to supply 10,000,000 young trees like it to be delivered a million a year for ten years

... too big an order for one tree. I could have supplied 65,000 annually had I been able to superintend the work. But I supplied only a few thousand." "When I am tired I sometimes feel that if the world does not care if the best varieties of plant life the earth has ever produced go to waste, I don't care either. . . . if thousands of improved varieties on the Sebastopol farm be permitted to go to waste. And they will go to waste unless somebody gives them attention I can no longer give." "The finest plum tree I ever saw—a tree that bore an abundance of big plums as sweet as honey—broke down because an employe forgot to thin out the plums on the tree as I told him to do. The tree broke from the weight of its fruit and before I knew it, was dead." "A man now wants to buy three acres of Sebastopol for a chicken ranch. But the plants might as well be destroyed to make way for chickens as to be ruined by neglect." "I once offered Sebastopol for \$100,000, but I would take a good deal less than that and be glad, if it were going into proper hands." "It should be in the hands of a State University. It seems a pity to convert it into a graveyard or chicken ranch."

It is regrettable that Mr. Burbank cannot understand other views of the life that is going on all around him except his own. It is a pity that he cannot understand, and apparently he cannot, that a gathering of thinkers, of undertakers, physicians, and so on, take themselves very, very seriously, each knows that his location is the important one to all mankind, others are important in a small relative way, but "my crow is the blackest" is the attitude of most crows, whether feathered or unfeathered.—BARRY.

#### FARMERS HIT RADICALS

#### REVOLT AGAINST "LIBERALS" MARKS CHICAGO CONFERENCE

Attempting to Turn Country into "a Land of Lenin" More Conservative Faction Seeks to Gain Control

Chicago, July 5.—Farmer delegates today launched an attempt to regain control of the conference here to organize a third political party.

Their conservative leaders took the floor of the opening session and demanded that delegates abandon the leadership of the "liberal" group comprised of C. E. Ruthenberg, convicted communist; Alexander Howat, "outlaw" miners' leader, and others.

The "liberal" faction still was firmly in control of the minorities' coalition conference today. Farmers fighting them allege they are attempting to turn the country into a "land of Lenin."

Committees worked overnight on plans to effect harmony and get the conference started back

to more conservative policies. Some progress was said to have been made.

The "conservatives" forced delay of the committee report on organization until the conference acted on policy and principles to govern the proposed party. The farmers obtained adoption of this special agrarian policy:

1. Elimination of landlordism and tenantry, with ownership of land confined to its users.
2. Public ownership of all means of transportation and communication, all natural resources and public utilities, to be operated by and for the people.
3. Issue and control of all money and credit by the government for service instead of profit.
4. All war debts to be paid by a tax on excess profits.
5. A moratorium of five days for all working farmers on their farm mortgages and debts.—Kansas City Star.

#### PROPAGANDA FOR REFORM

**Calcium Therapy in Tuberculosis.**—From a review of the literature, Mayer and Wells concluded that there is no convincing clinical evidence of the value of calcium administration in tuberculosis. They believe that no deficiency in blood calcium exists in tuberculous patients. From carefully controlled animal experiments these investigators conclude that calcium administration does not affect the course of tuberculosis in animals. If the use of calcium compounds in the treatment of tuberculosis is to be continued, clinical experiments of a scientific character should be conducted. At the present time there appears to be no scientific basis for the use of calcium in tuberculosis. (Jour. A. M. A., June 2, 1923, p. 1619).

**Cod Liver Oil in Tuberculosis.**—Experiments carried out in the Hygienic Laboratory of the U. S. Public Health Service to determine the effect of cod liver oil on the tuberculosis of the guinea-pig failed to show any definitely beneficial effects. There was no evidence of the deposition of calcium when this element was administered along with the cod liver oil. These results warn against unwarranted optimism and justify critical investigation whenever calcium or cod liver oil are lauded as a specific in tuberculosis. (Jour. A. M. A., June 16, 1923, p. 1778).

**Peptone in the Treatment of Migraine.**—The Council on Pharmacy and Chemistry publishes a preliminary report on the experimental status of the use of peptone in the treatment of Migraine. Drs. Joseph L. Miller and B. O. Raulston report that the intravenous administration of Peptonum Siccum-Armour brought about improvement in a considerable number of cases. The Council points out that commercial peptones are heterogeneous mixtures of uncertain composition, and that the results reported may have been due to tissue impurities rather than to peptone itself. It is, therefore, evident that the reported results cannot be made the basis for a rational treatment of migraine. Peptonum Siccum is stated by Armour & Co., to contain 90 per cent. of protein. Seventy per cent. of the protein content is in the form of peptone and secondary proteoses, while the remaining thirty per cent. is in the form of amino-acids. Those who wish to make experiments with peptone in the treatment of migraine should use the particular peptone used by Miller and Raulston or one which has an essentially similar composition. (Jour. A. M. A., June 30, 1923, page 1910)

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Meeting Place, Ardmore, May 1924

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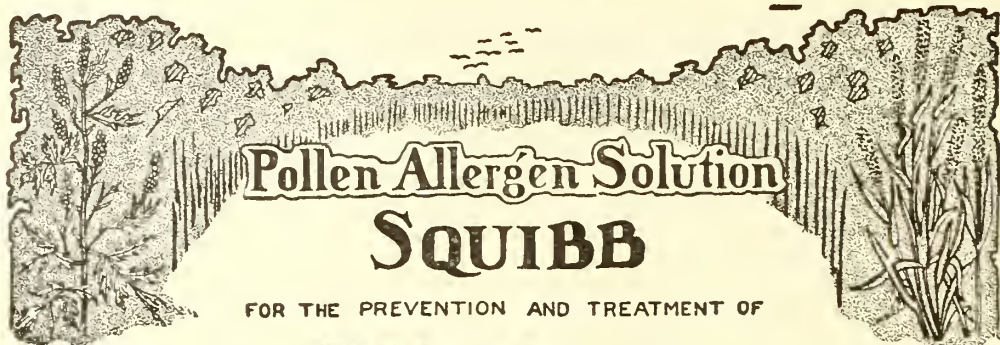
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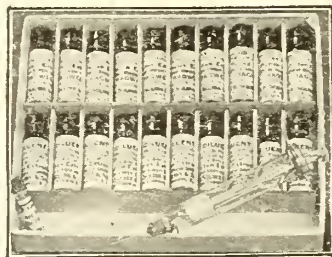
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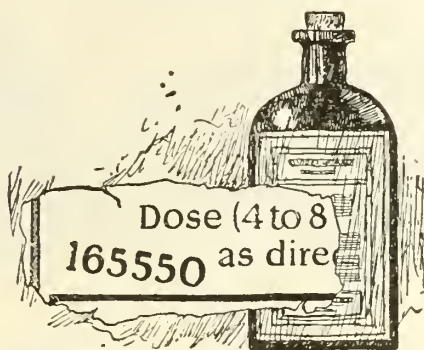
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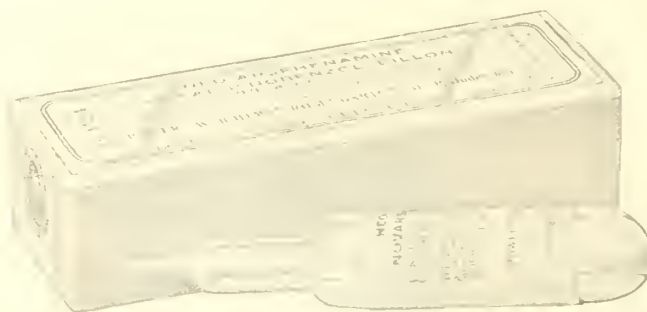
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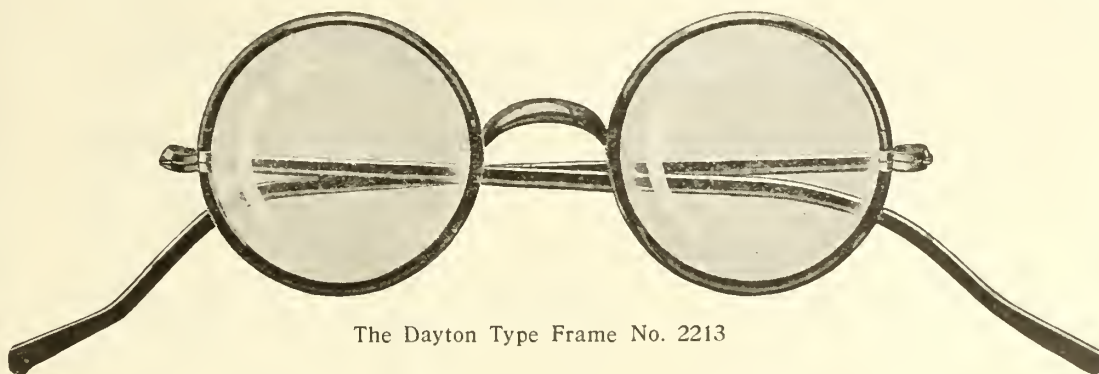
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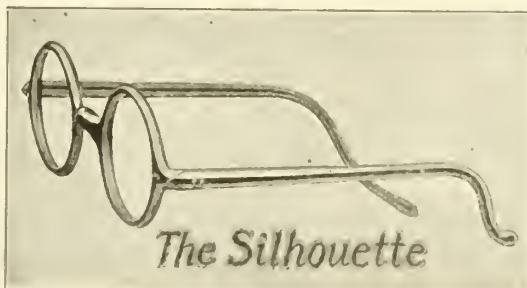
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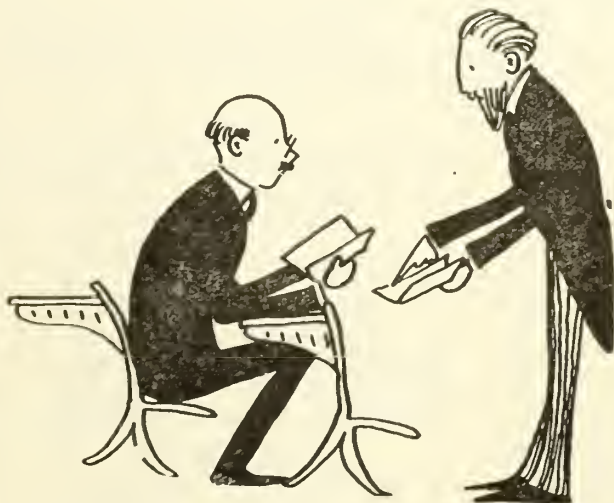
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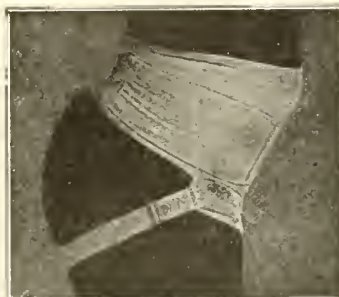
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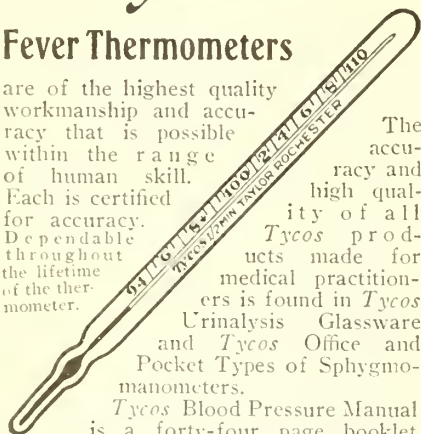
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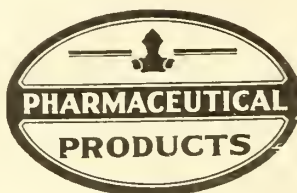
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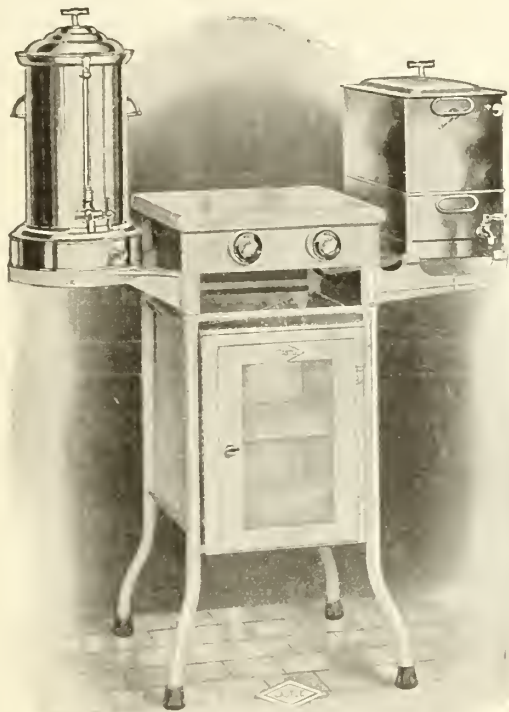
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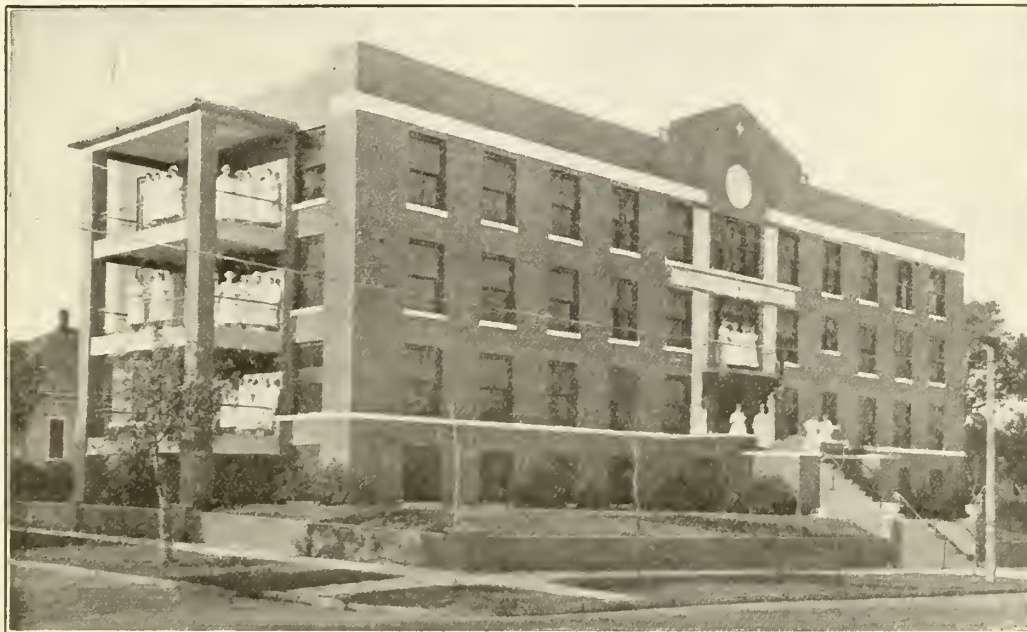
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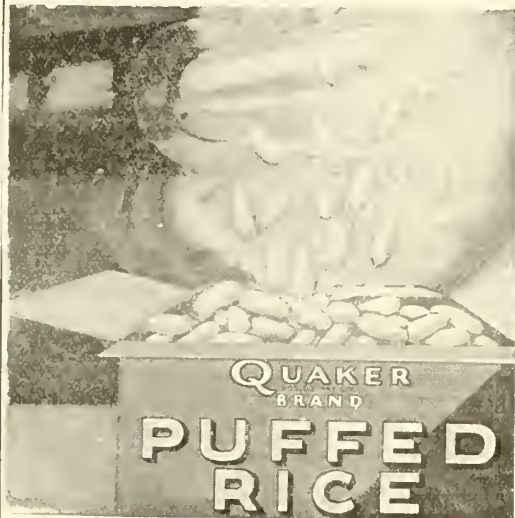
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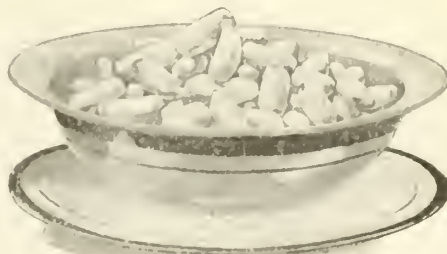
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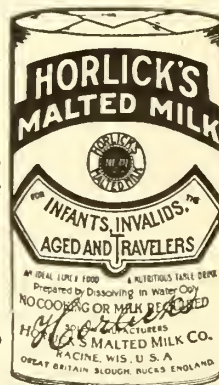
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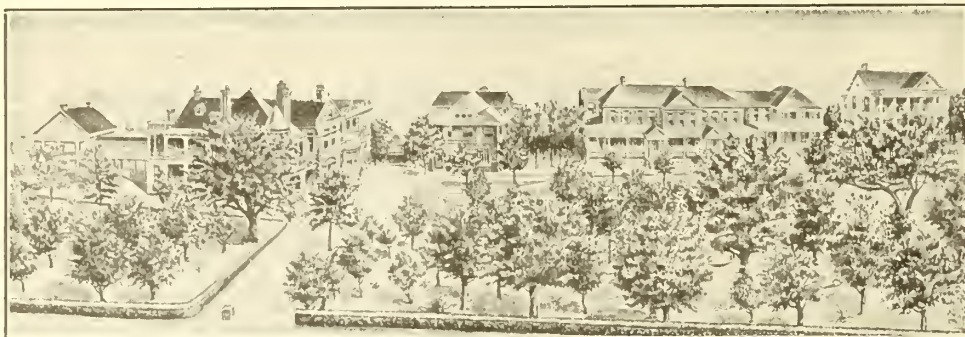
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## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., SEPTEMBER, 1923

NUMBER 9

### INTESTINAL PERFORATION IN TYPHOID FEVER.

T. H. McCARLEY, A. B., M. D.  
McAlester, Oklahoma

Typhoid Fever is now very properly referred to as a disappearing disease. However, the number of cases in the state each year warrants the presentation of one of its complications, viz.: Intestinal perforation, which is the immediate cause of one-fourth to one-third of all typhoid deaths.

I shall cite two cases from my practice. It was a few weeks after I came to Oklahoma and was associated with a physician of established practice. On two occasions I had seen with him an attractive child of about twelve years, who was suffering an attack of typhoid apparently of less than average severity. Toward the close of her second week, my confrere being out of town, I was called and told that the patient was suffering severe abdominal pain. Going to her at once I found a striking contrast to the comfortable patient of my previous visits. Her face was pinched and expressive of pain, pulse accelerated, abdomen tender and rigid. My diagnosis was intestinal perforation. My advise was that a surgeon of a nearby city be called at once. To this course of action the family did not consent. The regular medical attendant came in a few hours later and was able to convince the family of the necessity of surgical consultation. The surgeon came, after the needless delay of six or eight hours, but considered the patient too weak for an operation to be feasible. The little girl died about thirty-six hours after the first evidence of perforation, having been denied her chance of recovery. About August sixteenth J. L. B. came to my office in McAlester, saying that he had had fever for about a week but had continued at his usual work, which was that of manager of a light plant. His history and symptoms suggested typhoid and he was sent to the hospital. His clinical syndrome for the next several days was typical of the second week of a mild typhoid. About seven o'clock on

the evening of August twenty-fourth, when making my customary call at the hospital, I learned that this patient had complained of abdominal pain about four P. M. His nurse gave him a hot water bottle and told him that he would be alright soon. The patient's face was that of pain and anxiety, his pulse was slightly accelerated, his abdomen was tender and rigid, and his leucocytes were fifteen thousand. He was told that he probably had intestinal perforation and that an operation was imperative. A consultant concurred in this opinion and under ether anaesthesia a laparotomy was immediately done. The peritoneal cavity contained perhaps a liter of cloudy fluid. Beginning at the ileo-cecal valve the ileum was gently ascended. Along it there were many indurated and inflamed areas .5 cm. to 1.5 cm. in diameter. Some twenty cm. and again about thirty cm. from the distal extremity of the ileum, on its anti-mesenteric border, there were perforations. These were inverted and closed with linen purse-string sutures, reinforced with Lambert stitches taken in the direction of the long axis of the bowel. Two soft rubber drainage tubes were placed and the abdomen closed. One tube was removed on the third and the other on the sixth day. There was considerable drainage, as was expected, and some incisional infection, which was also expected. Recovery was otherwise uneventful. The first of these cases exemplifies that most depressing of a doctor's experiences, "It might have been"; the second, that most satisfying and exhilarating, "I saved a life."

As to the pathological anatomy of intestinal perforation, Devincenzi makes this observation, "The anatomical cause is a necrosis brought about by a thrombosis of the small vessels of the follicles. If necrosis is complete we have a perforation and a peritonitis. If necrosis is only partial, not involving the peritoneum, we have no perforation but an intestinal hemorrhage." The stages of this follicular necrosis are usually described as (1) catarrhal, (2) inflammatory, (3) ulcerative, with or without perforation, (4) reparative. The ulcerative

stage is usually not attained until toward the close of the second week of the disease. The perforation is in by far the greater number of instances anti-mesenteric and in the distal forty to fifty cm. of the ileum.

**Diagnosis.** That intestinal perforation is heralded by reliable premonitory signs is perhaps more fanciful than real. Daily increasing leucocytosis, meteorism and profuse diarrhoea accompanied by blood even in slight traces, have been accorded by some observers a place of importance in enabling one to foretell impending perforation. Given a case of typhoid or paratyphoid, on what shall we base a diagnosis of perforation? The condition is one of acute general peritonitis; hence, first, severe pain. Complaint of this may be largely lacking in a moribund or narcotized patient. The pain is most often in the right lower quadrant, but may be referred to the bladder, penis, perineum or epigastrium. Second, rigidity, which may be boardlike. Third, leucocytosis, which is a valuable symptom, particularly if a count has been taken one or more times previous to symptoms of perforation. Fourth, increased blood pressure, which after a few hours begins to fall. This symptom, too, has an enhanced value if daily pressure readings have been made previous to the catastrophe. Fifth, the face is pinched and anxious. Sixth, on auscultation a peculiar sound is said to be heard due to passage of gas into the abdominal cavity. Sudden fall of temperature, diminution or suppression of stools, costal type of inspiration and disappearance of liver dullness are inconstant signs. Decided increase in pulse rate, unless the perforation is accompanied with hemorrhage, marked tympany, nausea and vomiting are late symptoms and to wait for them is to "sin away the day of grace."

Complications due to typhoid with symptoms stimulating perforated ulcer, mentioned by the different writers as found either at operation or postmortem, include appendicitis, cholecystitis, perforative cholecystitis, gangrenous gall bladder, abscess of liver, ruptured mesenteric gland, phlegmonous urinary bladder, thrombosis of one or both iliac veins, acute intestinal obstruction, acute pelvise infection, hemorrhage, local peritonitis, pneumonia, and diaphragmatic pleurisy. To enter into an attempted differentiation of these would lead me too far afield. However, the following diagnostic hints are valuable. Peck says, "Where local symptoms are very marked and the constitutional fairly severe the indications are for a perforation, but where the consti-

tutional are very profound and the local symptoms not equal in severity we must then consider a thrombophlebitis." Perforation is far more frequent than any of the above mentioned conditions and may co-exist with one or more of them.

**Prognosis.** That a perforation may seal over as in a duodenal ulcer is at best only a faint hope. Prompt surgical intervention alone can save the patient. The mortality in three hundred and eighty-five collected cases was seventy-two per cent, the per cent increasing directly in proportion to the time elapsing between the occurrence of perforation and operation.

**Treatment.** It is important that nurses be instructed to recognize the symptoms of perforation and notify the attending physician at once. Because on one occasion the nurse did not summon me, I have emphasized to the nurses coming under by tuition the importance of the more prominent symptoms of perforation. Morphine should be withheld until a course of procedure has been decided upon, because it will mask the clinical picture. Novocain plus gas-oxygen is perhaps the best form of anaesthesia. Ether serves the purpose well, though it may be profitable to remember that a pleuro-pneumonia has been mistaken for perforation, in which case the administration of ether would be disastrous. Through a median incision some point of the intestine, as the ileo-cecal junction, is taken as a point of departure and the entire intestine explored, remembering that perforation has been found in every part of it except the duodenum. The method of closure will depend on a number of factors, as, number and size of perforations, condition of adjacent bowel and general condition of the patient. Inversion of the perforated ulcer, resection, bringing the bowel to the surface and suturing it to the wound and leaving the perforation open, and only draining, all perhaps have their indications. It is important that drainage tubes do not come in contact with the intestinal suture line. Because of the high per cent of post-operative herniae in these cases, incisional closure should be as accurate and thorough as circumstances permit.

I know of no more appropriate conclusion to this review than this advice of Michulics given in 1884: "If there is suspicion, don't wait for an exact diagnosis. Explore immediately for it is free from danger."

**Discussion:** H. A. Scott, M. D., Muskogee, Oklahoma.

It is pleasant to note the thoroughness in

which Dr. McCarley has covered the subject of Intestinal Perforation in Typhoid Fever.

It is true typhoid is a disappearing disease, however, this dreaded complication, namely: Intestinal Perforation is no less frequent in proportion to the number of cases.

Early diagnosis is one of the important factors concerning this disease. We should see our cases of typhoid daily and should have them in a hospital or at least under the care of a competent nurse, impressing upon the nurse daily that this complication is likely to occur and that she should be ever watchful for the symptoms of same, namely:

Anxious expression, accelerated pulse, abdominal pain, rigidity and tenderness.

The treatment of intestinal perforation in typhoid is immediate surgical intervention. The hospital here is a time saver and probably a life saver. The technic of operation in these cases should be governed largely by the findings in the individual cases.

As to prognosis in the early operated cases, the death rate is not more than seventy per cent increasing proportionately with the time lapsing between the perforation and the operation.

The cases reported were indeed interesting and bear out the facts mentioned in this paper: That early diagnosis and prompt surgical treatment is the only salvation we have for recovery in intestinal perforation in typhoid fever.

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### ALTERED PHYSIOLOGY IN DIABETES MELLITUS.

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WM. H. BAILEY, M. D.  
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Mosenthal defines diabetes mellitus as a disease characterized by an excess of sugar in the blood and by a constant output of glucose in the urine on a normal carbohydrate intake. Osler and McCrae add that there is a tendency to subsequent disturbance of fat metabolism with resulting acidosis. This gives us a more complete picture because we have first an altered physiology of the carbohydrates and second, of the fats.

The importance of an early diagnosis of diabetes mellitus with the placing of the patient on a suitable diet cannot be too strongly emphasized. The great majority

of the cases of diabetes are first discovered by the family physician or the insurance examiner making a urine examination with some of the alkaline copper solutions as Fehling's, Benedict's or Haines'. Not every reduction of the copper solution is a glucose reaction. Several substances partially reduce the copper giving atypical precipitates. These may easily be mistaken for true sugar reductions. Among these are lactose, frequently found in the urine of pregnant women or in mothers who have just recently stopped nursing their baby. Other substances which may partially reduce the copper are: pentose, maltose, creatinin, uric acid, urea, albumin especially when pus is present and a few others. Even the precipitate of the phosphates caused by the alkaline solution and the usual color changes that accompany it may at times be confusing.

The identification of the reducing substance, therefore, at times becomes quite important. If doubt exists as to whether or not the reaction has been caused by glucose, the fermentation or the phenylhydrazin tests should be made.

Before the sugar in the urine is a constant finding it undoubtedly only appears at irregular intervals. This fact emphasized the importance of making sugar tests on the urine of all your cases routinely, whether or not diabetes is suspected. Probably even before this transient glycosuria the patient will show a lowered glucose tolerance with a high blood sugar content. This can, of course, only be shown by blood chemical tests.

Altered metabolism in any disease is always of interest and often difficult to explain, but in the so-called metabolic diseases this is even more likely to be the case.

The intestinal digestion of the carbohydrates as well as their absorption into the portal circulation from the intestines is the same in the diabetic as in a normal individual. It is at this point that something is lacking in the diabetic which either prevents the patient from storing the glucose circulating in the blood in the liver or the muscles, where it is normally stored as glycogen, or makes it impossible for him to utilize this glucose as heat and energy, in the cellular metabolism of the body. The glucose not being used accumulates in the blood and is thrown off in the urine as glucose.

Physiologists now believe that the glucose cannot normally be utilized by the tissues of the body as glucose but that it must

first combine with or be acted upon by an internal secretion from the Islands of Langerhans of the pancreas. If this internal secretion is absent from any cause or possibly if it is lacking activation by a second internal secretion or chemical substance, the glucose cannot be metabolized and its percentage in the blood increases with its ultimate appearance in the urine. Whether this internal secretion of the Islands of Langerhans assist in storing the glucose in the liver and muscles as glycogen or only in its ultimate oxidation by the tissues or in both is not definitely known.

Normally we are able to ingest relative large amounts of carbohydrates without materially increasing the blood sugar or without any of it showing in the urine. This, of course, varies under different circumstances in the same individual and is different for each person. A normal patient should be able to take 100 gms. of glucose on a fasting stomach without its showing as sugar in the urine.

This is the so-called glucose tolerance test which not only gives us our sugar tolerance curve but also tests the renal threshold, that point at which the sugar per cent in the blood is high enough to cause it to spill over in the urine.

The patient with even milder diabetes will give quite a different glucose tolerance curve from a normal individual. The diabetic will show a delayed rise of the blood sugar content, the curve not reaching its highest point until well into the second hour and not returning to normal for that patient until after the third hour. The highest point also will be quite considerable often reaching 500 mgms. per 100 cc. of blood in severe cases. The normal person, on the other hand, will show a rapid rise in his blood sugar usually reaching its height by the end of the first 45 minutes and returning to normal before the end of the second hour. The highest point also will not be so great, usually around 250 mgms. per 100 cc. of blood.

This glucose tolerance test is of great value in the diagnosing of early cases of diabetes mellitus and a few other conditions and also in the treatment of diabetes. It is practically the only way of differentiating between a true diabetes and a renal diabetes, or as it should more correctly be called, a renal glycosuria.

Mosenthal states that renal glycosuria has only two points in its diagnosis but that both of them must be definitely estab-

lished. First we must have a glycosuria maintained at a fairly constant level, and not markedly affected by the carbohydrate content of the food; and second a normal per cent of blood sugar while the urine contains glucose.

Although most of these renal glycosurias remain perfectly normal and well for many years and often permanently without any treatment of any kind or even restriction of their diet, yet there are many authors who are inclined to consider these cases as incipient diabetes. They should at least be carefully watched and their blood sugar checked at frequent intervals. Every case of glycosuria should be considered a diabetes until proven otherwise. By taking such a position our early cases will not be neglected at the period in which the most can be done for them.

It is estimated that 58 per cent of the protein of the food can be converted into glucose as well as five per cent of the fat. That this is so is shown by the fact that in severe cases of diabetes it is often impossible to make their urine sugar free simply by removing the carbohydrates from their diet. It is often necessary to reduce their protein intake also.

There are 6-8 types of glycosurias, some of which cannot be differentiated from true diabetes, in fact, some of the factors mentioned here as causing diabetes are probably correctly considered as etiological factors in diabetes proper. Among these may be mentioned:

Glycosuria from the ingestion of large amounts of sugar.

Glycosuria from the puncture of the floor of the IV ventricle.

Glycosuria from the injection of epinephrin.

Glycosuria from emotional stimuli or nervous shock.

Glycosuria from mental strain.

Glycosuria from hyperpituitarism (posterior lobe).

Glycosuria from hyperthyroidism.

Glycosuria from injection of phlorhizin.

Glycosuria from a low renal threshold.

Glycosuria from an insufficiency of the secretion from the Islands of Langerhans of the pancreas.

Beside the deranged physiology in the carbohydrate metabolism in diabetes, we have, usually sooner or later, a derangement of the fat metabolism as well. This

improper oxidation of the fats leads to the formation of certain acetone bodies with resulting acidosis and coma.

Although the term acidosis is very broad and one about which there still is considerable confusion, yet in its broad sense it means not only the formation of an excess of acid radicles by the body but an accumulation of these acid radicles in the body. It is probable that the acid radicles that are the cause of acidosis in such conditions as uremia, myocardial insufficiency, diarrhea in children, acute infections, etc., are not the same in every case and that they are also different from those causing acidosis in diabetes.

It is the acetone or ketone group of acids that are thought to be the cause of acidosis and coma in diabetes. This group includes beta-oxybutyric acid and aceto-acetic or diacetic acid from both of which acetone itself is derived. The acidosis of diabetes therefore should more correctly be spoken of as a ketosis.

With the fats the same as with the carbohydrates the digestion in and absorption from the intestines is not altered in the diabetic. It is in the storing of the fats in the fat depots of the body or in the final metabolism of the fats by the tissues of the body that the failure occurs. The tissues are not able to completely oxidize the fats into their end product of carbon dioxide and water. These intermediate products, the ketone group of acids, accumulate in the blood causing acidosis and are thrown off in the urine as beta-oxybutyric acid, aceto-acid and acetone.

There are several tests which will give us the degree of acidosis that exists. Among these are, the amount of alkali necessary to administer in the 24 hours to keep the urine alkaline, the amount of acetone appearing in the urine, the quantitative estimation of the urinary ammonia, the carbon dioxide tension of the alveolar air, the H-ion concentration of the blood and the carbon dioxide combining power of blood plasma. We have found this latter as tested with the van Slyke apparatus very satisfactory.

**Conclusions.** Although it has been customary to take the per cent of sugar in the urine as an indication of the condition of our diabetic patients, this is not the best index. The per cent of sugar excreted is not of as much importance as the amount retained in the blood. This latter can only be obtained by blood chemical examination.

What we must establish is the carbohydrate tolerance of our patient. How much starch and sugar as well as protein and fat can our patient take without any harmful rise in the blood sugar content or before any sugar appears in the urine. In other words, how much of each type of food can he utilize and completely metabolize. We must reduce the intake until there is no hyperglycemia and no acidosis and yet all the time we must give the patient sufficient calories to sustain his nutrition. We must guard against starvation of the patient on the one hand and death by acidosis and coma on the other. The newer treatment of diabetes by Insulin or Iletin gives very favorable promise of assisting us in this problem and it is to be hoped that its wider use by the profession who have the facilities for controlling it with blood chemistry, will establish its true value.

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#### UNIVERSITY OF OKLAHOMA, SCHOOL OF MEDICINE.

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LeROY LONG, M.D., Dean.

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This school is one among the group of colleges operated by and through the University of Oklahoma. The relation of the School of Medicine to the university is the same as that of the School of Law, the School of Engineering, and so on, the control and operation of the various colleges in the University group being based upon the same general plan.

The first two years of the medical course was established at Norman in 1900, and for ten years the work of the medical department of the University was limited to the training of freshmen and sophomore students. In 1910 the third and fourth years were established at Oklahoma City.

In 1917 the entrance requirements were raised, the faculty passing a resolution providing that, in order to be eligible, applicants for admittance to the school must have had at least two years of academic college work, including the specific requirements of one year in biology, one year in physics, one and one-half years in chemistry, together with a reading knowledge of some modern foreign language. In taking this step, the school was one year in advance of the Association of American Medical Colleges, which did not put the two year requirement in effect until 1918.

The school now has a faculty of 73, there being 37 professors and associate professors, 16 assistant professors and 20 instruc-

tors. In this list are included all the full-time teachers required by the Council on Medical Education and Hospitals of the American Medical Association. The list does not include, however, a number of technicians employed in the various departments, especially in connection with the work at University Hospital which is a part of the School of Medicine organization.

The work of the first two years at Norman is in the hands of a capable and efficient personnel, and is done in a very creditable manner, but under great difficulties on account of inadequate housing facilities. This is now an acute situation due to the rapidly increasing number of applicants for

as a city hospital. This building is now the property of the school. Through various remodelings, it answers fairly well, so far as space is concerned, for the third and fourth years, but the work is handicapped on account of there being a distance of about thirteen blocks between this building and University Hospital where students receive clinical training.

#### **Clinical Facilities.**

The clinical side of the school has been developed during the last few years. At this time it would seem perfectly safe to say that the facilities for clinical teaching are good.

In 1917 the Legislature made an appro-



UNIVERSITY HOSPITAL, OKLAHOMA CITY

enrollment in first and second year classes. It will be relieved by the construction of a laboratory building to cost one hundred thousand dollars this year, but only partially relieved. Last year the class rooms at Norman were overcrowded to the detriment of both students and teaching faculty. The problem the coming year will be still more acute and troublesome. It has been necessary to deny admittance to practically all applicants outside of the State, this step being taken several months ago. This is a great misfortune, since applications for enrollment have been received from a great number of students whose qualifications are without question.

At Oklahoma City housing facilities are better, the school temporarily occupying a very good building on Stiles street between second and third erected primarily for use

priation for the construction and equipment of a hospital to be owned and operated by the School of Medicine. The struggle against bitter opposition to secure that appropriation may not be generally known, but it was waged incessantly until the victory was won. The multitude of friends that rendered unselfish service in the interest of the school at that time can not be enumerated here, but it is pleasing to reflect that it was truly a multitude. Among them were State officials, including members of the Legislature who, regardless of section or party or creed, stood firmly for the appropriation which they believed, as we believed, meant so much for the building up of the medical department of the University. In this multitude were progressive men and women who had no official positions, but who were interested in the

welfare of the citizenship of the Commonwealth. Above all, there was a great army of physicians who were familiar with our needs, and who had confidence in our plans and purposes. This multitude of Oklahoma citizens, composed of the various elements indicated, stood like a wall—they not only stood, but they fought. University Hospital was the first result; an "A" grade medical school was the next result. This successful fight was the crucial period in the history of the School of Medicine, and we wish here to make grateful acknowledgment for the unselfish and broadminded efforts in behalf of this particular department

purpose of making it as nearly as possible an ideal teaching plant, and a plant through which efficient service may be rendered. It is managed by a Superintendent, and there is a Medical Superintendent in charge of professional work, the dean of the School of Medicine exercising general control. At this moment there is a House Staff of 15, composed as follows: One Resident in Medicine, one Resident in Surgery, and, working under them, twelve internes in Medicine and Surgery and one interne in Dentistry. In the way of material equipment all essential requirements for good service are met—pathological, bacteriological, serological,



OKLAHOMA UNIVERSITY SCHOOL OF MEDICINE

of the University, and to report that the confidence of those who helped us and trusted us has in no wise been betrayed.

On account of the delay in building due to the war, University Hospital was not opened for the reception of patients until August 1919. From the very beginning it has functioned in a most satisfactory way. At first there was a normal bed capacity of 176. Since that time additional buildings have increased the capacity to 276, it being possible to care for 300 or more patients in an emergency. In fact, on several occasions there have been over 300 patients.

While there are a few private rooms, practically all patients in University Hospital may be used for teaching purposes. Students are assigned work as clinical clerks, and are in close touch with patients.

The hospital is organized with the double

and chemical laboratories; radiological equipment, heart station, metabolism station, record system, together with the sundry instruments and apparatus for the investigation and treatment of patients in all departments of medicine.

Besides the hospital, the school conducts an out-patient clinic at the School of Medicine building on Stiles Street between second and third streets every week day. The average daily attendance is from 100 to 150. The students are assigned to the several departments, and assist in the examination and treatment of patients.

The number of students in the school is limited only by the inadequate housing facilities referred to above. Last year there were 132 regularly enrolled, there being 47 freshmen, 37 sophomores, 24 juniors and 24 seniors. The coming year the classes

will be even larger. Even if admissions to the first two years were limited to citizens of the State, which would be a manifest misfortune, it is clear that we would not be able to take care of the increasing numbers without disastrous overcrowding. In order, then, to limit classes to correspond with housing facilities, it would be necessary to deny admittance to citizens of the State, and this would involve discrimination that the school is anxious to avoid.

But there is an even more important necessity for adequate quarters. The limitation of classes to our own citizenship tends to a narrow provincialism. The modern medical school should be more or less cosmopolitan in character. In that way there is interchange of thought which is of the greatest service to all concerned, and in that way whatever good work that may be done by the institution is recognized not only within the borders of our own State but in many places throughout the country—even in many places throughout the world. We should—we must have the broader and higher view and build here a great institution that will serve not only Oklahoma, but the world, for in doing this Oklahoma will be better served.

At present, as indicated above, the School of Medicine is geographically divided, the first two years being at Norman and the last two years at Oklahoma City. This is a great misfortune for the following reasons:

1. Medical educators are unanimous in the belief that all four years should be at the same place for the good of the students. It is the unanimous opinion that even from the very first year in medical school the student should have opportunities to come in contact with patients in dispensary and hospital. In that way the student is able to see a practical application of what he studies in even the freshman year. He grows into the profession rather than being suddenly thrown into it after two years of class room work in which he is unable to see the relation that should exist between it and the practical work of the profession for which he is preparing himself.

The better medical schools of the country are now holding clinics for the benefit of freshmen and sophomore students. As medical teachers view the situation, it is a procedure of fundamental necessity in the training of medical students. During the coming

term in this school we shall undertake to partially carry out the plan, although to do it the students at Norman will have to make stated trips to Oklahoma City where we have necessary clinical facilities.

2. Oklahoma City is the logical place for the school. The school owns 15 acres of land upon which University Hospital stands, and this tract was set apart as a home for the medical department of the University. Property now owned by the school in Oklahoma City, including University Hospital, is valued at well above half a million dollars. Transportation facilities to and from Oklahoma City are good, and this is important in connection with clinical patients who come from all parts of the State. It is possible to secure clinical teachers without great expense because here clinical teachers have opportunities to make a living outside of the work they do in the school. For these, and many other reasons, it seems that all four years should be united at Oklahoma City.

3. With the present arrangement, there is, to a certain extent, duplication of personnel. There is duplication of libraries and of museums. In fact, it is necessary to maintain two distinct establishments.

4. With the school geographically divided, it is not possible for the faculties of the two ends to have free intercourse. It is with great inconvenience that they can get together even in formal faculty meetings.

In this article nothing has been said about the modest efforts in the field of research which members of the faculty are undertaking. Nothing has been said about the plans through which poor people are sent to University Hospital from everywhere in the State. Nothing has been said about University Hospital Training School for Nurses in which there are now over 70 students. In fact, many details of interest and value have not been brought forward for the reason that the object of this article is to call attention to some of the outstanding features, good and bad, of the School of Medicine to the end that the medical profession of this State may be truthfully advised, and, being advised, assist us in every proper way to build here in Oklahoma a great medical school that shall be known not only in our own State, but throughout the nation; not only at home but abroad.

The management of the school is anxious

for the physicians of the State to visit the various departments, and to make themselves at home with us. Our libraries, our records, our lecture halls, our laboratories, our clinics are open to you. We will feel honored to have you come and stay as long as you like.

### OSTEITIS DEFORMANS.

S. R. CUNNINGHAM, M. D., F. A. C. S.  
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Since the time of Pagets original article in 1876, this disease which bears his name has presented an interesting problem as regards etiology and likewise treatment. Although a rather abundant literature is available, there has been little of importance added to our knowledge of Pagets disease in the past fifteen years. Believing

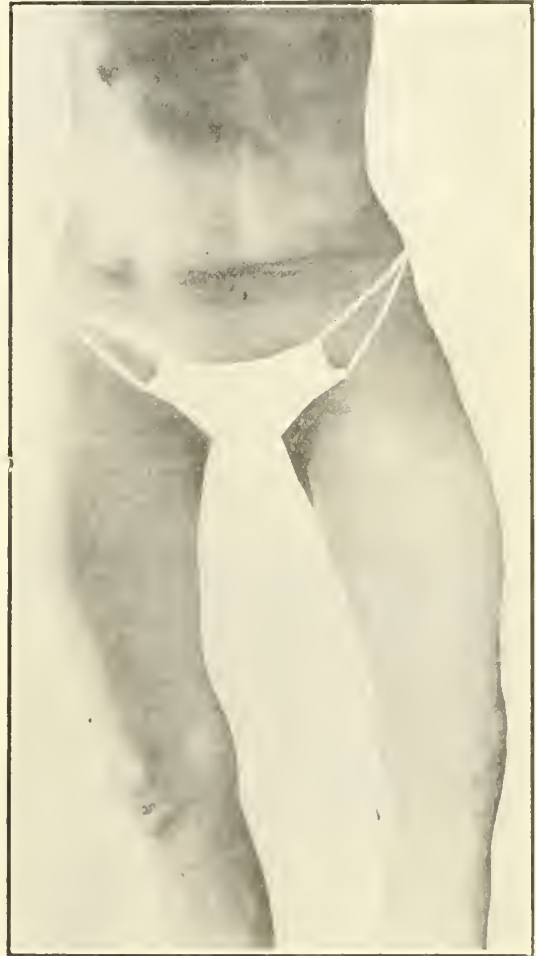


that by constant observation and application, close study and accurate description, we may promote discussion and eventually clarify the situation by substituting facts for conjecture, I submit this brief discussion and the case report.

Pagets is essentially a disease of the age when all tissues of the body are in decline—"The age of scar tissue formation." Although pathology is confined to the osseous system it seems we must look elsewhere in search of the etiological factor. Since the distribution is often bilateral and symmetrical, we are apparently dealing with a systemic condition. The characteristic bone changes are dependent to some extent at least on altered metabolism and we should be amiss in disposing of etiology were we not to consider the endocrine system. Cas-

tration causes a marked withdrawal of calcium salts—Pagets appears at a time when the gonads are rapidly retrogressing in activity, we therefore have a reasonable cause for the early chemical changes. Since one gland in this system is rarely involved alone, it seems that investigation should be carried on with reference not to the testicles alone, but to the dependent glands as well.

The occurrence of Pagets disease is by no means common, as but 257 cases have



been reported to date. In the three years between 1914 and 1917, 21 cases were added, (1) whereas in the past five years but 19 cases have been reported. It has been many times estimated that there is one case of Pagets recognized in every ten thousand admissions to a general hospital.

Pain in the back alone or back pain radiating into the lower extremities is the most common subjective symptom met with. The pain in the thighs and legs is most marked where the deformity is great-

est. Since headache has become the ambidextrous spectre of frightful portency to orthopedic and industrial surgeons, its as-



RIGHT FEMUR

sociation with Pagets disease should not be forgotten. At times a constant dull headache is complained of in which case, we may anticipate changes in the bones of the skull.

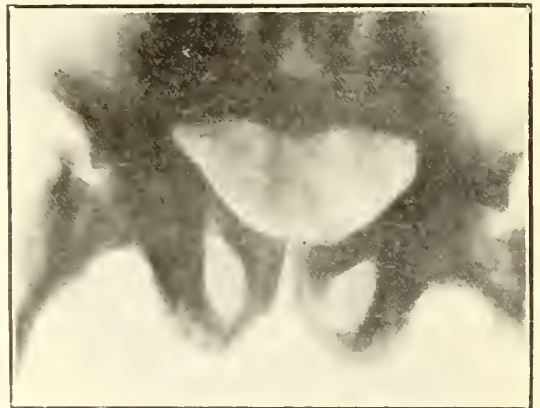


LEFT FEMUR

Other symptoms are not characteristic of the disease, but are of the nature one so frequently finds at this age. Gross path-

ology consists in marked advanced bony changes—especially in bones of pelvis and thighs.

From a pathological viewpoint it seems contradictory that we have at once a bowing of the long bones and also a marked production of osseous tissue. In addition, it must be recalled that the bones which have a great supportive function are the ones in which the deformity is most marked; on the other hand those bones involved which are not supportive, i. e., bones of the skull, ribs and pelvis show marked degeneration, but little deformity. Where bowing takes place there is marked cortical thinning of the side of the concavity. (2) From these facts it seems logical to deduce that there are two separate and distinct stages of the disease, one which is characterized by bone softening and withdrawal of inorganic constituents of bone, the other or late stage that of overproduc-



tion of bone. During the early stage of shortening we have a condition similar to rickets and likewise a similar deformity upon which is builded the additional overproduction, such a similarity to rickets exists that Pagets has been called "rickets of middle age." Since rickets is a deficiency disease and also influenced by unhygienic surroundings, these factors should be at least given importance of mention.

Once seen there is no hesitancy in diagnosing a well developed case of Pagets disease. The typical appearance is not duplicated in any other condition. One needs only be reminded of the heavy appearing thick skull, the prominent protruding lower jaw, the partial flexion of the cervical spine, the diamond shaped abdomen with almost complete obliteration of the costiliac space and most striking of all, the most characteristic "stance" of the afflicted one. In the earlier cases where it is doubly important to make correct diagnosis, one

must make use of the X-ray, as a roentgenographic plate or plates of the skull will show the first changes which are recognizable as characteristic. We often see an increase in the lymphocytic elements of the blood stream, both small and large lymphocytes being increased over the normal. It has many times been noted that arteriosclerosis is unfailingly associated with Pagets disease, but because of the fact that (3) the former condition is so common in later life and the latter so rare it would seem that the association does not attain the important position of cause and effect.

### Case History:

Mr. C. H. (Case No. 32901). Age 48 years, white male, admitted to my service at St. Anthony's Hospital, March 3, 1923. Complaining of pain in back and lower extremities of 14 months' duration. Family history is irrelevant, past history unimportant with exception of two accidents—one in childhood (fracture right leg which promptly healed) one more trivial at onset of present illness—causing injury to back while at work in a coal mine. There were no cardiac or circulatory symptoms. Since January 1922 has noticed rather severe pain in back and thighs. More marked on right—during past year has noticed a continual and gradual bowing of both femurs and has lost about five inches in height. Six months ago had a high sole placed on right shoe—has noticed no change in size of hat.

Examination shows an elderly man with box-shaped head—teeth out with the exception of a few snags—some sclerosis of radial arteries. Blood pressure 118 over 76. No changes demonstrable in heart muscle. Marked increase in size of bony pelvis and also great outward and forward bowing of both thighs. Gait is slow and difficult.

The X-rays taken at this time are shown in the cuts. It will be noted that the bones of the skull show thickening and irregularities—also rarified areas of occipital, frontal and parietal bones. A diffused mottling is seen in the pelvis bones and both femurs. The urine was alkaline, otherwise negative. Red blood count shows no anemia. The W. B. C. total 5,900 with 52 small lymphocytes, 48 polys and one eosinophile. Temperature and pulse were normal throughout hospital residence.

We have in this case then a typical stature and gait and likewise characteristic X-ray findings. It is interesting to note that the much discussed cardio-vascular changes were little in evidence in this case. The white blood count shows the characteristic

elevation of lymphocytic elements. The areas of rarification in the bones of the skull are similar to the "cranio-tabes" of early childhood, so often seen with rachitic conditions. This case deviates from the usual in the fact that although bilateral, the changes in the long bones were not symmetrical. Unless etiology is established, prophylaxis is impossible. If recognized early, hygienic and medical management might affect an arrest of symptoms. In rare instances, orthopedic appliances or even osteotomy might be advisable.

(1) Journal of Bone & Joint Surgery—Jan. 1922.—Lewin.

(2) Journal of Bone & Joint Surgery—Oct. 1922.—Cone.

(3) Medical Clinics of North America—Jan. 1918.—Locke.

### LEST WE FORGET.\*

JOHN W. RILEY, M.D., F.A.C.S.  
Oklahoma City, Oklahoma

As I look upon this empty plot of ground as it existed twenty-five years ago, and then see it today, transformed, as it were, into one of the most beautiful and attractive institutions in the state of Oklahoma, I cannot help but admire and revere the noble women that made this institution possible, through untold and unsung sacrifice, and noble service to those fellows of humanity that might need it in the most trying hours of their existence. It stands as one of the grandest monuments that man has bequeathed to humanity. It is evident from its growth and successful administration that it has met with a divine approbation.

Sometimes, I wonder as we accept and take what we find in our little life, if we appreciate what it meant to someone in the course of its construction. Each brick and nail represents a tear, a sorrow or a care, and out of this cloud of discouragement and embarrassment came the smile of self satisfaction and the words, "I have done and given the best that is in me. If I have failed it is the fault of the mind and not of the heart."

Such is the history of accomplishment, of sacrifice, of service of the Sisterhood of St. Frances to the community of this city. I say this because I wish you to realize and understand that the things that you enjoy today were purchased at no small cost. This beautiful home that you have at your command this evening stands as a last monu-

\*An address delivered at Graduating Exercises, St. Anthony's Hospital Training School for Nurses, Oklahoma City, May 22, 1923.

ment in the work of this noble order of the Sisters of St. Frances.

Tonight, we stand, as it were, at the parting of the ways. The long looked for day has arrived, and as we have finally reached the goal, there is mingled with this bouquet, the flowers of sorrow and regret. It exemplifies in a small way the great pathway of life—a pathway strewn with hopes and anticipations, failures and embarrassments. In the morning there is hope, in the evening discouragement; today health and vigor vibrates through us, tomorrow sickness and death shake our very foundations and leave us as a frail remnant of yesterday. With each step our vision grows in all dimensions. Clouds and darkness give way to light and sunshine. The impossible now becomes possible. As each one feels the pang of pain and the sting of misfortune he becomes as the divine Creator intended him to be—more human. He has more sympathy for his fellows.

The glass of life, as you look through it, shows our ideals more magnified, and the cord of contact is touched that places you more directly in touch with the world.

Man's noblest inheritance is service—service untiring and unselfish. Service is the queen that is enshrined in the human heart, a queen that is jealous and imperious, a queen that is sublime and rapturous in her beauty. To undertake this service is not always a profitable or agreeable task, and like all other good things in life, it gives you the self-satisfaction of knowing that you are right and your effort, however it may be received, is an inspired one.

A study of the history of human benefactors exemplifies the difficulty and chagrin experienced by many of them. But, as we stand at the other end of the great pathway of life, we acknowledge with sincere gratitude, the service that each has rendered posterity. Fortunately for the race, service has not demanded or anticipated commendation or praise. Harvey first taught his theory of the circulation of the blood to his class in 1616. He realized that if he was to succeed in establishing his idea of the circulation of the blood he must do it through the young student. He was so well acquainted with the intolerance of men in regard to new discoveries that he hesitated to publish his book until men were prepared for it. He believed that by continually teaching it to his classes the knowledge would gradually filter out among the profession. Thus, he depended upon the younger men to accomplish his purpose. This was not his original idea, but it was a pro-

cedure that had been and is still used by the majority. The younger men believed in the truth and were ready to fight for it. He continued his propaganda for fifteen years before committing his ideas to print. He had more than suspected the great truth for twenty-five years before he printed it. Opposition and serious unpleasantness were anticipated. He was not disappointed. His friends deserted him and his consultation practice dwindled to one-half what it was before. It was considered as good evidence that a man who would advance such a theory was unsafe as a consultant.

Oliver Wendell Holmes, our great American poet and physician, in his propaganda to explain the cause and reduce the death rate of puerperal sepsis, was deserted by his friends and his practice was very much reduced as a result of his ideas.

At one time it was more dangerous for a woman to have a child in a lying-in hospital in Europe than to have typhoid fever. To a most vicious attack by Dr. Hodges of the University of Pennsylvania and Dr. Meigs of Jefferson Medical School, who were the leading authorities on obstetrics at that time, he had the following answer:

"It is as a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamities they have caused; they have closed the eyes just opened upon a new world of life and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it with less cruelty the death of its dying parent. There is no tone deep enough for record, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the street has pity upon her sister in degradation when the seal of promised maternity is pressed upon her. The remorseless vengeance of the law brought down upon its victims by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claims for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should regard it negligently, unadvisedly, or selfishly."

It has frequently been said that the great

advances of the nineteenth century in medicine were first, the discovery of anesthesia by Morton in Boston and Simpson in Edinburgh, through which pain was annihilated; second, the discovery of asepsis by Lister, through which the dread of surgical infection was abolished; third, the establishment of training schools for nurses, which furnished to the physician cooperating, intelligent assistance in combatting and healing disease.

Elizabeth Fry, Pastor Fliedner, Florence Nightingale, and the nursing Sisterhoods, by their unselfish devotion to service, made monarchs and empires understand; their small whispered voice was carried by the gentle breeze that first fanned the faces of the wounded and dying and then rushed on like a cyclone until it found the listening ears. At first it was barely audible, but it continued on its mission until it had battered down all formalities and customs. From Newgate, Brighton, Kaiserswerth, Crimea, St. Thomas and our own Civil War the call went out to the listening thousands, not as a representative of the Roman vestal but as a guardian in Plato's republic.

The army formed for the carrying on of this noble work came from the representative women of the civilized world. These noble men and women were happy when they could be of service to the sick and wretched. On the altar of sacrifice and service was formed the great institution of nursing. The very breath of life in these noble historical figures of the past had the very touch of the supernatural and their work caused the angels to sing as in divine commendation.

We see dimly in the past,  
What is small and what is great,  
Slow of faith, how weak an arm,  
May turn the iron helm of fate."

Medicine has made many wonderful advances. It has left the swaddling clothes of ignorance and superstition. It has annihilated pain. It has robbed disease of its mystery and prestige and has wiped out the morasses of death from the fair bosom of the earth and replaced them with gardens of paradise. It has given to men a mightier spirit of strength, vigor and longevity.

In accomplishing these things the nursing profession has taken not small part in the drama, and as long as there is life on this planet the nursing and medical professions must cooperate and advance side by side.

Think well of what we are here for. Re-

member well the heritage of your profession.

This evening I am going to deviate from the usual flattery that is handed out in the nurses' graduating exercises and nurses' organizations and speak to you of the great peril, as it appears to me, in which your organization is being drawn. As I recite these unpleasant epochs, I wish to assure the honest, noble women of the nursing profession, of which there are thousands, that they need take no offense. No one has a greater admiration or appreciation than I have of the true disciple of Florence Nightingale. My own dear wife came from this noble profession, and I would stultify my manhood if I did not show by word and deed my appreciation of her and her profession. At the same time, I cannot but feel that some of their leaders and organizations have led the unsuspecting and innocent majority into unwarranted embarrassments and humiliation.

In a neighboring city I am informed of the pernicious activity of some of the registered nurses in fomenting the spirit of intolerance. It is true that this is but one of the symbols of the time, but in such people there must be a vein of degeneracy, and they certainly are not fitted to lead the honest and just. The efforts expended in their training were wasted. It is nurses of this type that cause the odium that is all too prevalent at this time.

Recently, I attended a meeting, at which the nursing problem was discussed, and if you believe that it is not a problem, then you are not acquainted with the current opinion as it exists at this time. It was universally conceded that the nursing profession, as it exists today, is entirely different from the profession of twenty years ago. Great dissatisfaction was expressed by every speaker on the subject. The principal objection was the arrogant manner with which the organizations of nurses are forcing their whims on the public and commercializing humanity.

One of the speakers in this meeting was a woman physician of Chicago, and she stated that she had a good preparatory education—I do not remember now exactly the extent of it—and she had decided to take up nursing as a profession. She applied to the training school of a hospital in Chicago and was turned down because of insufficient education. She felt very much put out about it, and after thinking about it for sometime, she decided that she would study medicine. She went over to the med-

ical school and registered, graduated from this institution, and subsequently became the Chief of Staff of the hospital whose training school had declined to admit her as a nurse. It would be very interesting to all present here this evening if she were only here to tell her story of the work she has done since then.

The nurse is not the recipient of all the deplorable secrets of life, as is the priest or the doctor, but they are frequently in households of miseries, many of which can not be hid. All the cupboards are open to them and they become the involuntary possessors of the most secret confidences, which are known to no other soul. The Hippocratic oath could well be given to the nursing profession at graduation as it is to the medical profession.

The garrulous chatterer is always with us. They always know some spicy gossip that is embarrassing or injurious to somebody. The bander-log has no place in either the medical or nursing profession. To neglect your own work in order to review the charts of other patients and thereby entertain the morbid appetite of the crowd is highly distasteful to the refined nature of most people, and sometimes, whether this gossip is true or false, it causes untold injury to the party concerned.

Brown well said, "Think not silence the wisdom of fools, but if rightly timed the honor of wise men, who have not the infirmity but the wisdom of taciturnity."

The tendency of the times has been to develop a highly educated and technical woman. Perhaps, there is some justification in this movement in so far as supplying teachers and educators to training schools, institutions and public work of different kinds. But, to insist on this as a general practice, does not show good sense or logic. It is untenable to believe that the practice and fundamental principles for which Florence Nightingale worked and lived are no longer necessary. The question then comes up—Why do we have training schools for nurses? To furnish the physician with cooperating, intelligent assistance in combatting and healing disease.

Stripped of all its veribage, it means that the physician must do his utmost to make a diagnosis and outline a management or treatment that will either cure the patient, allay his suffering or attempt to give him care and comfort until his exit. In this drama, the nurse plays an important part, and that is first to obey the physician's orders and to be diligent in her duty as re-

gards the care and welfare of the patient. If she is so trained and technical that she cannot or will not do this, we do not need her. This is what the patient is paying for, and he is not interested in knowing whether his nurse can give the chemical formula of salvarsan or tell why the white blood cell is increased in pneumonia. He still believes his physician can attend to this. If he can not get the bed pan when he needs it, if he cannot get a bath without taking it himself, if he has a five inch hole in his abdomen and cannot get anything to eat unless he feeds himself, if he cannot be kept clean after the passage of urine or bowel movements—then he feels has had no service. His wife could do these things for him, but she is not a nurse. She cannot ramble in the realm of cellular pathology, but she has a heart and is willing and anxious to do the things that will make him comfortable. What the physician needs today is a nurse that will take care of his patients, and if the young woman who professes to be a nurse is not willing to do this, we must acknowledge our mistake in calling her and get the required assistance elsewhere, in order that we may give the sick individual the necessary care.

Please do not infer from these remarks that I believe in overworking the nurse—no, not at all. But, I insist that the nurse have a heart—a heart that is sympathetic—a heart that reaches out to the bed-ridden man or woman and by her personality and skill makes him comfortable, both mentally and physically.

Another too common practice is in regard to what you might call the specialities in nursing. A call comes in for a nurse. The doctor is informed that "I am a hospital nurse and I do not take care of patients in the home or in the country." Or, if they should do so, the question quickly comes to the listening ear, "How many are there in the family?" "Have they a cook?" etc. If the call comes in at night, they do not take night calls. If the patient is desperately ill and needs trained assistance, the physician is informed that they would not work as hard as the care of that patient demanded for anybody. If the patient is nerve racked and wrecked from disease, a diagnosis of a mental patient is made and according to schedule, three dollars per day is added to the usual fee. If medical advice is sought, during the physician's absence, she does not hesitate to give advice about something of which she knows but little, and she usually answers 100 per cent wrong. At other times it occasionally happens that an over-

charge is made, and she tries to take that which does not belong to her.

I say a blush of shame for such a nurse. We pity her rather than censure her. We are thankful that there are only a few of these "vamps" in the nursing profession. It is only necessary to warn you, lest her kind increase. You, with the spirit of nursing in your heart, should deal with this variety like the Gospel tells us of the cockle growing in the good wheat. Be proud of and defend the noble heritage of your profession. Today you are needed more than ever before. Duty and service were never more urgent.

"Once to every man and nation,  
Comes the moment to decide  
In the strife of truth or falsehood  
For the good or evil side.

"Some great cause, God's new Messiah,  
Offers each the bloom or blight,  
Parts the goats upon the left hand  
And the sheep upon the right,  
And the choice goes on forever,  
'Twixt the darkness and that light."  
—Lowell.

### *Abstracts, Observations from Current Medical Literature*

#### PEDIATRICS AND THE CHILD

The added knowledge that the physician must have to become a pediatrician, Borden S. Veeder, St. Louis (*Journal A. M. A.*, Aug. 18, 1923), says, is a knowledge of the child. This requires (1) a knowledge of the physical growth and development of the child and the factors which affect it—or nutrition, and (2) a knowledge of the mental development and psychology of the child. There is an old conception of the pediatrician as the physician who devoted himself to infant feeding—a conception still erroneously held by many today, including even a few specialists. The entire question of the nutrition of the older child has been, with few exceptions, a development of the last few years, and it has been found to be a field of almost equal importance with that of the infant, and a field susceptible of almost limitless exploration. A knowledge of

the psychology of childhood is as essential to the pediatrician as a knowledge of disease, as it is an integral part of the development of the child, and without it one cannot understand many of the factors influencing physical growth. Child hygiene is at present the most important motif in pediatrics. In child hygiene work it has been the child that has been the topic of consideration—not disease or medicine. Child hygiene is nothing more than the application to the individual of the measures that lead to the normal growth and development of the child, and the methods by which these measures can be applied to large numbers of children. It includes not only physical health but also mental health. The change in conception of the physician from the healer of disease to the counselor of health is the great advance made by the present era of medicine, despite the tremendous impetus and eclat that have been associated with medical research in the last few years; and this is particularly true in the field of pediatrics. The reduction in infant mortality, which is the proudest achievement of pediatrics, has not been due primarily to the development of any method of artificial feeding or to the study of disease, but to education in hygiene and the study and correction of the environmental factors which lower the physical well-being of the infant.

#### THE OCCURRENCE OF BLASTOCYSTIS IN INTESTINAL INFLAMMATION

Kenneth M. Lynch, Dallas, Texas (*Journal A. M. A.*, Aug. 18, 1923), records a case of acute diarrhea of three months' duration in which *Blastocystis* occurred in small numbers and of small size in the passed stool, but in large numbers and in large, actively dividing form in preparations taken directly from cleaned rectal ulcers of unexplained origin, thus seeming to warrant suspicion of its connection with the ulcerative process. The organism was not obtained in culture in this case. In this instance it is worthy of note that *Endolimax nana*, although present in the stool, did not occur in the ulcers.

### NEW WORK ON INSULIN.

Recent investigations indicate that a substance like insulin, the new remedy for the treatment of diabetes, exists in tissues of the animal body other than the pancreas. This substance has been called "glucokinin" and has also been found in considerable quantities in such plants as lettuce and onion tops, and in yeast. It has also been found that insulin is of value in the treatment of certain conditions known as acidosis and ketosis which occur in diseases other than diabetes.—*Hygeia*, September, 1923.

### THE TRAIL OF THE CANOE.

When I see a procession of automobiles racing along a country road I am reminded of a remark by an Indian when he saw his first automobile: "Ugh, too easy!" Exercise as such is distasteful to most people. Canoeing is a sport, one of those in which the game is the thing, and the exercise is acquired without knowing it. On a canoe trip, especially if you have a few portages, you will use every muscle of the body and the muscles on each side of the body in equal degree. One trip down the St. Croix river should be enough to convert any skeptic. It is impossible to read the descriptions by Earl Christmas in the September issue of *Hygeia* without wanting to take his advice and try it. There is no more healthful activity and none in which it is so easily possible to limit the amount you do to the capacity you have.

### PREGNANCY AFTER INTERPOSITION OF THE UTERUS.

Although a successful procedure for prolapse of the uterus presents a decided hazard to future pregnancy, as is shown by the cases reported by Irving F. Stein (*Journal A. M. A.*, Aug. 11, 1923). Because of the fixation of the anterior wall and fundus of the uterus, only the posterior wall is available for development during pregnancy, and at term the cervical canal is perpendicular to the axis of the inlet. Thus, the pelvic inlet is obstructed by the undeveloped anterior wall of the uterus, and labor results in a tendency to flatten the cervical canal from side to side instead of obliterating it from above downward. With the cervix in this position, rendering spontaneous labor impossible, and the anterior uterine wall fixed to the anterior vagina there is only one rational procedure for the treatment of advanced pregnancy, namely, abdominal hysterotomy.

### POISONOUS PLANTS.

The family of plants that furnishes the lowly "Irish potato" includes a number of poisonous plants. In these outdoor vacation days, it is wise to have some knowledge of these dangerous plants and the manner of aiding those who incautiously eat their frequently attractive fruits. In the September issue of *Hygeia* Dr. Ticken describes and pictures some of the commoner varieties such as the jimson weed, the nightshades (belladonna), bittersweet, henbane and hemlock. In treating poisoning by these various plants, the first essential is to empty the stomach as soon as possible. This may be done by sticking the finger down the throat, tickling the throat, or giving an emetic of mustard and water (two or three teaspoonfuls of a mixture of a teaspoonful of powdered mustard to a pint of water). A physician should be summoned as soon as possible, but emptying of the stomach should not be delayed until he arrives, as often the avoidance of serious and even fatal consequences is possible only when the amount that has been swallowed is reduced to a minimum.

### NONUNION IN FRACTURES: THE MASSIVE BONE GRAFT.

Of 221 cases of nonunion by Melvin S. Henderson, Rochester, Minn. (*Journal A. M. A.*, Aug. 11, 1923), 184 were traced; 138 have obtained union, and forty-six failed to obtain union. The nonunion was in the lower extremity in 133, and in the upper, in eighty-eight. The femur was involved in seventy cases, forty in the neck and thirty in the shaft; the tibia in fifty-four; the forearm in eighteen, and the ulna alone in eight; the humerus in forty-one, the patella in nine, and the clavicle in one. The most common site for nonunion in the shaft of the femur was in the middle third; in the tibia, the lower one third; in the humerus it was about evenly divided between the middle and lower third;; in the radius and ulna combined, the site was most common in the middle third. In the radius alone it was most common in the lower third, and in the ulna alone, in the middle third. The bones named in the order in which the best results were obtained are the patella, the radius, the ulna, the tibia, the humerus, the shaft of the femur, and the neck of the femur. The massive autogenous graft is preferred, and firm internal fixation of the graft to the fragments is also essential. The fact that occasionally success follows the use of metal plates, bone screws, beef-bone

plates, and so forth, does not establish the fact that they are to be preferred to the bone graft. In a large series of cases there is ample proof of their inadequacy. Adequate external fixation must also be provided.

### A CRITIQUE OF MODERN METHODS IN RACIAL HYGIENE.

A few weeks ago, the president of a famous university declared himself sponsor of a "self-education study plan" for undergraduates which superficially seems exceedingly attractive, for it enables the undergraduate to choose some particular field for research, lessening his other requirements at the same time. But actually, Walter Timme, New York (*Journal A. M. A.*, July 14, 1923), says that such a plan is in exact keeping with modern life; the young adult or adolescent without the experience and mature judgment necessary for a choice of such importance naturally chooses that course most acceptable and which offers the least resistance. He really takes the easier way. The criticism offered by Timme is that life almost never offers such choices, but always presents problems that must be faced and surmounted without play or musical accompaniment. Life's problems themselves are usually disagreeable and provided by others. With no early training or experience to meet such contingencies, we do not face but evade them. This evasion is the basis of modern weakness of conduct. Real work is rarely done—always is a rapid short-cut substituted, and hence foundations are lacking. Poverty of thought and no independence of judgment are the order of the day. A public so poorly educated cannot distinguish between the judgment of a physician and a chiropractor, or between a minister and a Christian science reader. Of course, a civilization thus founded cannot but deteriorate. The old American idea of self-help, the old indomitable pioneer spirit, has given way to the new idea of being helped by the law.

### WHAT DO INTELLIGENCE TESTS MEASURE?

Are intelligence tests worthless? What is meant by mental age? It is true that the average mental age of the American people is 14, and if so what does this mean? Different people will probably answer these questions in different ways, largely owing

to the fact that their real purpose and significance is not understood. In the September issue of *Hygeia* M. L. L. Thurstone, of the Bureau of Public Personnel Administration in Washington, clearly and carefully analyzes the meaning of the tests and their value. He says: "An intelligence test is intended to measure, more or less roughly only, the degree of mentality or intelligence of the candidate." A school examination is intended to measure how much we know, how much we have learned from a course of instruction or from experience. The intelligence test is intended to measure, not how much we have already learned, but how good a mind we have, irrespective of our education. For this reason many of the tests often seem to be foolish and too easy. In many of them the person examined is required to learn something, and he is graded on the speed and accuracy with which he does so. For the same reason, the method of marking is made objective, that is to say the answers must conform to certain standards that have been found by experience to represent certain stages in mental activity, and the credit given does not depend on the opinion of the person who marks them.

"One of the most common misunderstandings about intelligence tests concerns the idea expressed by the term mental age. We hear statements to the effect that the general population of the United States is only fourteen years old mentally, and that it is a very terrible fact. The psychologists are largely to blame, I believe, for this absurd misinterpretation." The fact of the matter is that the tests by which mental age is measured do not go above fifteen years and, since there must always be some people with less intelligence, the general average is bound to be below fifteen. Mental development beyond the years of early adolescence consists in learning to use the facts that we have acquired and new methods and tricks of solving problems as well as control over emotions and volition. It is these properties that spell the difference between the mind of the adult and that of the child. These qualities are not taken into consideration in the intelligence tests in ordinary use.

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### EDITORIAL

#### THE DEATH OF MR. HARDING.

The death of no president has caused the universal bereavement that was produced by the tragic death of our President while in the midst of a strenuous western trip. As has been noted by various writers, there is a strange similarity in the death of Mr. Harding, and the nearly fatal and terribly crippling illness of Mr. Wilson, who, like the President, was also attempting to deliver a message to the people, an endeavor in which he, like Mr. Harding was thwarted at every step by envious and selfish leaders in his own party. The message

they both sought to deliver had for its object a lessening of the present miseries of the world, especially the stricken European countries, and, it was believed by them the only alternative to possible future, unnecessary and murderous wars upon innocent peoples. One sought the League of Nations, the other a Worlds Court as a means to the end. It would seem that we would not have to murder our great chief executives over such things. It would seem that at least some of the proposed measures be given good faith trial. This certainly should appeal to all when it is understood that neither of these measures were partisan affairs, though they were deliberately made so by designing politicians. It should appeal to us especially upon recalling that both Mr. Hughes and Mr. Hoover, unquestionably the two most unselfish men in Mr. Harding's cabinet, unofficially and privately stand for the principle of the League of Nations as advanced by Mr. Wilson, and, after failing in that they take their stand for the World's Court. It would seem that the average citizen who can know little of the grave features surrounding all these propositions, might at least entrust the enactments thereof to honorable men who are close to the troublous times and their causation. But not so, the President himself, regardless of his grave physical condition, forgetful of the ever present possibility of physical wreckage and breakdown, must, perforce, and at the constant nagging and insistence of petty politicians, undertake impossible tasks. It is now both medical and lay history that Mr. Wilson was most solemnly and urgently warned that his undertaking of the Western trip might mean his death—this from his personal physician and good friend, Admiral Grayson, who had prior to that been the medical advisor of both Mr. Taft and Mr. Roosevelt. It is generally understood that Mr. Harding, too, was closely watched, that his close friends and physicians, especially Drs. Work and Sawyer, feared the consequences of his attempt. Their judgment is now recorded as a mournful fatality of great historical moment, for Mr. Harding's death may easily change the political complexion not only of the United States, but add to the already troubled and impossible European conditions. It may mean another world outbreak of impossible limits.

Some one should have the power to put a positive veto upon the exertions of our Presidents when such exertions may mean death. We have no right to exact such terrible recompense from our greatest and best beloved citizens.

## THE STATE BOARD OF MEDICAL EXAMINERS.

Elsewhere in the columns of the JOURNAL is a notice from the State Board of Medical Examiners, the perusal of which is recommended to all physicians of the State. The personnel of the the new Board is made up of men who have the ambition to place the profession in this State on as high a plane as that of any other State. To this end it is highly essential that they have the cooperation of every physician in Oklahoma in the observance of the law, particularly by the older Doctors, and the cooperation and assistance of all individuals and Medical Societies. The Board courts all such cooperation, assistance and constructive criticism as will tend to elevate the profession, and every individual concerned is enjoined to further this laudable endeavor.

## THE CAUSE OF DECREASED MORBIDITY.

The April issue of **Current History** contains an article by one Fred C. Kelly, which article seems to be hunting an argument or trouble of some sort for the said Kelly. Mr. Kelly "doubts" the great fall in diphtheria mortality as being due to antitoxin, doubts that the great fall in smallpox morbidity and mortality is due to vaccination, and is rather inclined to offer the shibboleth "sanitation," "hygiene," etc., as the real causes of all these marvelous fallings off in the former great death rate of these diseases, as well as others.

Ordinarily no notice should be given these articles, but when the inexcusable mistake is made of permitting such irresponsible writers space in supposedly authoritative publications, when their maunderings go to hundreds of thousands of people who know no other side of the matter, then physicians must have their attention called to the true situation in order to combat the foolishness.

We would suggest as absolutely disposing of one part of this matter that a number—say a dozen—immaculately groomed, manicured "scientists," "Chiros" or what nots, be isolated with one genuine case of smallpox for only a few days. Give them every sort of local preventative, give them medicines to take (if they would take them) give them magazines, food, books, a victrola, in fact, make their life one continuous round of just resting lazily, but await the results with absolute confidence as to the larger majority of the "Martyrs," for as surely as the sun rises, they will develop

smallpox, provided, of course, they are not people who have previously had that disease or been vaccinated against it.

We will not propose the horrible **similar similibus** as to diphtheria, for it is too unfair to any set of little tots, even those of savages, or of "scientists" or any other ism, but "Mr. Kelly" may rest assured that perusal and half way fair deduction from thousands of pages of undisputable evidence on the question, that the cleanest of throats, the most hygienically kept children "fall" for and become infected with diphtheria just as easily as others not so clean or hygienic.

## THE STANDARD FEE-BILL AGAIN.

"About fifteen county physicians met here . . . the establishment of a minimum rate for different types of service was discussed, but no action taken."

And we are glad that "no action was taken," for it is our firm belief that more woe and hurt can be and is caused by the establishment of these "minimum" rate fee bills than any other one line of action accomplished or considered by groups of physicians. The injustice and hurt in the thing lies in the fact that not all physicians are good men, that some of us, not many, thank the Lord, are grasping, greedy, avaricious to an astonishing degree, so, when a rate bill is established it is applied with equal hardness and ferocity to all classes, without reference to the pitiable plight of the individual of the case. For that very reason such establishments are condemned and disfavored by those of our leaders who have given the subject much thought and consideration. Knowing the viciousness of some of us, they hesitate to place such a weapon in the hands of all of us. The writer knows personally and positively of one case in Muskogee wherein a baggage-worker was charged \$5.00 for an unavoidable night-call to his wife (in those days the usual charge for such was \$3.00, but the "fee-bill" read \$3.00 to \$5.00). Well, the physician was within his rights legally and technically, and the man, he simply had to pay it, though his wages were only \$12.50 weekly. If he did not pay, garnishment of his wages meant loss of his position. He paid because he knew the nature of the physician with whom he had been dealing. Of course, he employed that physician never again, but that did not prevent an embittered feeling against **all** doctors on account of the action of **one**. Fee-bills are dangerous weapons, too dangerous to be indiscriminately loosed to all hands.

## WATCH THE COUNCIL ON PHARMACY AND CHEMISTRY, A. M. A.

Not with an ulterior idea nestling in the back of your cranium, to be sure, but for the sole, self beneficent purpose of helping yourself, your patients and your general reputation in the community you call "home."

Occasionally, before this, we have noted the work of this Council, and it is with a distinct shock we come to realize that too many of our profession have not even the vaguest idea of what the Council is, what its functions are, and lastly, by no possibility realize the very great good it has done, is doing and will continue to do.

We have too many physicians who, even yet, in this day of modernity, accept the glib, smooth, oily statements of the detail man, as to the merits of the composition he walks into the office with and offers for trial. Beware that man. In him lies, often danger, certainly no good. We should cultivate the absolute habit and create the fixed rule of making the very beginning of an interview with the detail man begin with the question, "Are your products **'Council Passed?'**" Be assured that, as a rule, if they have not had the favorable report of the Council, they are worthless—worse than that, often they are positively dangerous when used on the assumption that they will perform all the miracles claimed for them by the man who has them to sell.

The Council's reports are issued weekly, in the back part of the Journal, A. M. A. Finally, when the year is concluded, the entire result of the findings are neatly bound and offered for sale at a very nominal price by the A. M. A.

You are most emphatically assured that the writer, who knows many highly efficient and informed physicians, knows not one able to dispense with the information unearthed by this Council in the course of its unprejudiced work. Their conclusions reach into every conceivable medical path and by-way. Nothing escapes the ferrets, who methodically and painstakingly carry their investigations to the limit of reason, then, briefly, concisely, and without fear or favor, hand us the end results of their labors.

## NOW LET'S DO THE RIGHT THING REGARDLESS.

We have just passed through an Annual Meeting, the wheels are all greased with many new commiteemen, several new departments of the JOURNAL have been

created, each of the Associate Editors seem to feel keenly the responsibility and wish in good faith to do something. All this is fine, as it should be, and things should get better.

But, there is one aspect ever present with us, which demands serious betterment; if possible, complete eradication. This is the constant fault finding, criticism, either without or with small cause, bickering, and the ever ready tendency to "throw my hat in the ring" toward the other fellow. Now it is a fact, well known to those who have travelled the long rocky road of actual, bitter personal experience, covered with its triumphs, its humiliations, its dissatisfactions; that mostly, our brother physician is a much better man than we thought he was before opportunity came for us to get close to and know him. It is not intended as a reflection upon anyone to say that we have a few members, and perhaps the writer is somewhat so inclined, a little too ready to take exception to that which should be treated with silence and thus soon forgotten. It is a fact, too, that some of us are not able to see anything but the bad, the discreditable in every act of certain others of us. Now it is a fact that mostly men are good, good inherently. They do not intend to hurt anyone in the manner they use, the words they express or write, but they simply forget for the moment how it may feel to others, how sensitive others are about that very thing. The result—enemies—sometimes of the type never healed, carried through life, unforgiven, and all over a silly nothing at the outset. Suppose with this new administration just beginning let's forget for a time the bad features of the other fellow. Certainly it is not creditable, but a reflection on one's intelligence to be found criticising and ever finding, not anything good, but always the bad in our colleague. Surely he has some good features, just as surely as the critic himself has some bad ones.

Anyway, let's stop it and short off. The attitude deceives no intelligent, observant man and no one cares for the effect it may have upon the fool.

All this is to diplomatically say that the JOURNAL is very tired of being made the "goat"; sometimes almost the catspaw is intended as our role. We will not accept the assignment. On the contrary, it is our principle to give every member his just due, to have him know that this affair is his, just as much his as anyone else's. Above all things we resent being dragged into a row as a partisan when the only honorable position we can assume is that of referee.

So, let's stop it. Instead of worrying and scheming for the downfall or hurt of some other man, let's try a turn at the library. It will be found much more helpful, decidedly less harmful.

### *Editorial Notes—Personal and General*

DR. S. H. WELCH, Dacoma, has moved to California.

DR. J. H. KAY, Durant, lost a fine home recently by fire.

DR. A. W. ROTH and wife are in Colorado for the summer.

DR. H. L. SUMMERS, formerly of Osage, has located at Hominy.

DR. C. L. ROGERS, of Alva, has recently relocated at Dacoma.

DR. J. W. HENRY, formerly of Oklahoma City, has located at El Reno.

DR. and MRS. A. K. WEST, Oklahoma City, are visiting Colorado points.

DR. LEVI P. MURRAY, Wellston, is motoring over Texas and Colorado.

DR. A. S. RISSER, Blackwell, is spending a vacation at Hollister, Mo.

DR. F. E. HILSMAYER, Weleetka, is in a Henryetta hospital, due to illness.

DR. H. A. FORD, of Tulsa, and family, are visiting California places of interest.

DR. J. H. MORGAN, Tulsa, and family motored to West Texas, to spend a vacation.

DR. H. L. SUMMERS, Osage, attended the clinics in Chicago during the month of July.

DR. H. D. MURDOCK, of Tulsa, is spending his vacation in California with his family.

DR. C. J. FISHMAN, Oklahoma City, has removed his offices to 132 West 4th Street.

DR. J. S. MEREDITH and family, Duke, spent August in Arkansas visiting the home folks.

DR. J. H. SCOTT, Shawnee, was recently elected County Physician of Pottawatomie County.

DR. and MRS. C. W. ALEXANDER, Temple, motored to Colorado points in July and August.

DR. JOHN T. PERRY, Tulsa, is locating at Sand Springs. He is a son of Dr. M. L. Perry of Tulsa.

DR. J. B. McCLURE and family, Norman, have returned from a summer visit to Colorado points.

ST. ANTHONY'S HOSPITAL CLINICAL SOCIETY will resume its meetings on September 7, 1923.

DR. J. L. JEFFRESS, Ada, has moved to Wilson,

Okla., where he is in practice with Dr. W. H. Campbell.

DR. H. W. FORD, Tulsa, and family are touring to the Pacific Coast, through the Grand Canyon of Arizona.

DR. H. B. AMES, of Alva, is absent on a tour of the Pacific Coast states, returning about September 1st.

DR. A. A. WEST, Guthrie, was called to Rochester, Minn., recently, by the serious illness of his brother.

DR. A. C. BYARS, Wilburton, with his family are removing to California where they will reside in the future.

DR. J. W. SCARBOROUGH, Gould, is locating at Granite, where he has formerly been in practice many years.

DR. WILLIAM LANGSFORD, Oklahoma City, returned recently from Battle Creek, Mich., and Toronto, Canada.

DR. T. C. SAUNDERS and family, Shawnee, motored to Estes Park, Colo., where they spent the month of August.

DR. J. HUTCHINGS WHITE and wife, Muskogee, are spending the rest of the summer in Minnesota and Canada.

DR. S. L. WELCH, Dacoma, who has been practicing there for over eighteen years, is making his future home in California.

DR. C. J. GRAY, Hominy, is due for trial on the allegation that he has been practicing medicine without being duly licensed.

DR. and MRS. RAY M. BALYEAT, Oklahoma City, are spending a few weeks at Salt Lake, Utah, and Yellowstone Park.

DR. FLOYD E. WARTERFIELD, Muskogee, is visiting the Ann Arbor Clinics and doing his special work with Dr. Hugh Cabot.

DR. CHAS. F. WALKER, Grove, mourns the loss of his Dodge car. It is a 1923 model, engine number 913302 and license number is 232,887.

ADMIRAL DEWEY, it is said, is responsible for the following: "One-half of what man eats keeps him alive, the other half keeps the doctors alive."

DR. A. E. CARDER, Coweta, has embarked in the oil business. In conjunction with some friends he is preparing for drilling operations near his home town.

DR. E. K. WITCHER, Pawhuska, and brother, Dr. Robert Witcher, Chicago, left for Scotland, via Montreal. While in Scotland, they will attend several clinics.

DR. CHAS. A. BRAKE, and family, Medford, spent part of August at Colorado Springs, where the Doctor will take a post-graduate course in general medicine.

DR. and MRS. F. M. BAILEY, Oklahoma City, are visiting New York, Atlantic City and other

Eastern cities. Before their return they will also visit Canadian points.

DR. L. J. MOORMAN, Oklahoma City, has returned from a vacation spent in Wyoming. It is reported he caught two rainbow trout at one casting in the Platte River.

DR. O. E. TEMPLIN, of Alva, who holds a commission as Captain in the Reserve Corps, spent two weeks in July at Fort Sill, and has been recommended for promotion.

DR. E. K. WITCHER, Pawhuska, is making an extended visit to Scotland and Continental countries. After taking in the clinics at the University of Edinburgh, he will return to Pawhuska.

DR. D. A. BEARD, Tulsa, city physician, has recommended that Owen Park swimming pool be drained, that a fence be built around it and that thereafter the water be completely changed every twenty-four hours. Good advice.

DR. J. W. HENRY, Oklahoma City, who has been appointed superintendent of the hospital for drug and alcoholic addicts, located at the old Darlington Indian Agency, near El Reno, is making, with an engineer, a visit and survey of the plant.

DR. WM. GALLAHER and family, Shawnee, after attending the A. M. A. meeting at Frisco, spent several weeks in Oregon and Washington with relatives and friends, returning by way of Boulder, Colo., where their son is a student at the State University.

DR. and MRS. ELLIS MOORE, Oklahoma City, are spending the year in Baltimore where Dr. Moore is doing special work in the Brady Urological Institute with Drs. Hugh Young and J. T. Geraghty. Dr. Moore is an associate of Dr. W. J. Wallace.

OKLAHOMA was unusually well represented at the National Tuberculosis Association meeting, held at Santa Barbara, California, in July. It is said, considering population and the distance to be covered, that we excelled all other states in attendance.

DR. J. W. HENRY, Oklahoma City and DR. G. W. TAYLOR, El Reno, have taken over the direction of the new State Drug Addicts Institution at Darlington, the former as medical superintendent and the latter as assistant in charge of clinical work.

THE AMERICAN ROENTGEN RAY SOCIETY will hold its 23rd annual meeting at Chicago, Ill., on September 18th to 21st, 1923, with headquarters at the Congress Hotel. Many prominent contributors to the program include not only those of our own country, but those of England, Germany, Argentina and China as well.

DR. LeROY DOWNING LONG, Oklahoma City, graduate of Harvard Medical School, 1921, is touring Europe after an internship of two years at Methodist Episcopal Hospital, Brooklyn, N. Y. Dr. Long is the son of Dr. LeRoy Long of Oklahoma City, and will join his father in the practice of general surgery in October.

THE TRI-STATE MEDICAL ASSOCIATION will hold its annual assembly at Des Moines,

Iowa, October 29th, 30th, 31st, and November 1st. All physicians in good standing in our state association are cordially invited to attend and take part in the program. Many eminent members of the profession throughout the country have accepted invitations to take part in the program.

SAND SPRINGS bathing pool authorities "beat" Dr. Hartshorne to it recently by securing an injunction restraining the doctor from in any manner interfering with their activities. The order has not yet been made permanent, however, and will not likely be, for restraining a health officer from the performance of his duties, which may change or alterate at any time, would be a step not likely to be taken by a sensible court.

CHIROPRACTIC TREATMENT of a seven year old child's infected eyes at Oklahoma City, is being judicially questioned by the courts as to its sufficiency and applicability. The parents contend that it is sufficient, but the Associated Charities representatives of the city decided otherwise and asked that the child be given over to the custody of those who would see that it was properly treated. A jury will decide the question.

THE ANNUAL CONVENTION OF THE AMERICAN ROENTGEN RAY SOCIETY is among the forthcoming important meetings of special societies. This is to be held in Chicago with headquarters at the Congress Hotel, the time of the meeting being from Sept. 18th to 21st. A number of eminent foreign contributors will appear on the program, and the announcements indicate that treatment by high voltage x-ray will have a prominent place on the program.

WOODS COUNTY MEDICAL SOCIETY met in Freedom July 31, and the following papers were read, "What We Know About Cancer," by Dr. Cherry of Alva; "Fracture of Both Femurs in Advanced Cancer Patient," by Dr. Clapper, of Wynoka; Report of case of Auricular Fibrillation with clinic by Dr. Hunt, of Freedom. After the program the Doctors adjourned to a grove near Freedom where Dr. Hunt entertained them and their wives with an elegant picnic supper.

DR. HORACE T. PRICE, of Tulsa, was elected president of the Oklahoma Public Health association at an executive meeting here today to succeed Fred Struble, of McAlester, who resigned.

Ever since the inception of the Tulsa County Public Health association five years ago, Dr. Price has been in charge of the tuberculosis clinic, until a recent illness. He is a member of the board of directors of the national tuberculosis association, according to Miss Bess Richardson, secretary of the local association.

STATE BOARD MEDICAL EXAMINERS meeting held in July passed the following named doctors by examination: A. G. Bacoats, Meharry Medical College; Dr. G. L. Borecky, U. O.; Wayne Bronaugh, Jefferson Medical College; Merle C. M. Clift, U. O.; Percy P. Cooley, U. O.; Wm. E. Eastland, U. O.; W. B. Fuller, U. O.; G. E. Garside, U. O.; Hugh C. Jones, Northwestern University; Judah Lee, U. O.; F. M. Lingerfelter, U. O.; W. F. Lunsford, U. O.; P. M. McNeill, U. O.; Melvin T. Means, U. O.; E. R. Musick, Northwestern University; K. C. Parks, U. O.; S. H. Pogoloff, U. O.; J. C. Perry, U. O.; E. R. Vahlberg, U. O.; C. E. White, University of Tennessee.

The following named were licensed by reciprocity: Wm. Bell Goddard, Kentucky; Henry C. Ritch-

ey, Illinois; Earl Fred Camp, Nebraska; Dock W. Shamblin, Arkansas; Wade H. Sisler, Tennessee; Daniel K. McCurry, Arkansas; John E. Locke, Missouri; Daniel W. Crawford, Tennessee; Wm. W. Brooks, Tennessee; John F. Bolton, Arkansas; Henry A. Biermann, Nebraska; Swartz Baines, Arkansas; R. W. Bell, re-registration; Wm. Le Blanc, re-registration; E. F. Yancy, Missouri, and Wilson J. Ferguson, Missouri.

**THE AMERICAN CHILD HEALTH ASSOCIATION**, with headquarters at 370 Seventh Ave., New York, N. Y., is offering resident and travel scholarships for physicians, for the furthering of child health. Ten thousand dollars is available to physicians who wish a broader training and to those who would like to visit demonstrations and health centers. The scholarships carry with them the freedom of choice of institutions with approved courses—demonstrations and places doing some outstanding piece of child health work; and are to take place during the school year 1923-1924, and the summer of 1924. Application blanks and further information will be furnished on request to the above address.

**TULSA COUNTY MEDICAL SOCIETY** passed a resolution that a committee be appointed to look into the hospital needs and the general hospitalization conditions of Tulsa. Appointed on the Committee: Dr. A. Ray, Chairman, and Drs. Garrett, Stallings, Cronk and Summers. The Delaware Baptist Association, the Baptist organization in this district, composed of six Counties, is interested; it being one of the duties of the Baptist Church to build and operate hospitals. The Chamber of Commerce has appointed a committee to look into the hospital situation and to see what can be done to expand the hospital facilities; to see what can be done toward the completion of the St. John's Hospital project by its sponsors or to arrange for its transfer to some other organization that will finish it.

**HON. JOHN A. WHITEHURST**, President State Board of Agriculture, has this to say about Stillwater School:

"You are aware that we have passed through a very trying ordeal in attempting to keep your college free from a sentiment which you, as young blooded Americans could not accept. We want you to use your influence in advising your friends and associates who might have made plans to attend other institutions outside of Oklahoma, to reconsider and return to the Oklahoma A. & M. College the coming year. We want them, we need them and there shall be nothing left undone to give to them all of the advantages to be obtained from a carefully selected faculty.

With your splendid assistance we will be enabled to make the year 1923-1924 the best in the history of this excellent institution. Oklahoma A. & M. College belongs to the youth of our country and we want them to come to us."

**DR. GEORGE E. HARTSHORNE**, county superintendent of health for Tulsa County, may think he is in serious trouble, but he is not. Recently that aggregation of supposed wisdom, the county commissioners of his counties, decided to cut the doctor's salary. They did, and the cut is about as effective as an order from a monkey to a man would be. Section 8860, Oklahoma Statutes, definitely fixes the salaries of such officers, county commissioners to the contrary, notwithstanding. They may wish to cut the salary, but they have no

such power, and it was obviously never intended to permit the fixing of such salaries at the whim of any set of three, generally ignoramuses. Another thing, too, as long as there is a cent in the salary fund of the county, the superintendent of health is entitled to his salary, identically as sheriffs, county attorneys, treasurers, etc., are entitled to theirs. Dr. Hartshorne might hand this to the commissioners to mull over for awhile, after which they may wake up.

**McINTOSH COUNTY MEDICAL SOCIETY** is not, never was, and long as it maintains its present gait, will never be a back number in any sense. The writer had the privilege of attending one of its bi-monthly meetings August 7 at Checotah. After a series of clinical cases, carcinoma, sarcoma, undetermined bladder neoplasm, cardiac and other cases, the members heard an interesting paper upon bladder diverticula by Dr. Lee Hoffmann, Kansas City, after which the meeting adjourned to a lake a few miles west of the city and those who did not swim enjoyed the purposeful antics of many of the physicians and their visiting friends. After this there was another move, the best one of all to the writer's mind, to a hill nearby, the country for miles across Deep Fork Valley showing in all its panoramic beauty. Here fried chicken as only artists of high order know how it should be prepared was the order of the hour. With the chicken there was every other sort of appropriate food, and its virtue was mutely evidenced by its almost total absence at the end of the feast. Many visiting physicians and their wives and families were present from Muskogee, Eufaula and other towns. The point of all this is, and especially to county secretaries: Why not emulate this live wire Secretary, Dr. W. A. Tolleason, of Eufaula, who, for years has been pulling off these stunts successfully, with what result? One of the liveliest, regardless of its small membership, county medical societies in the country. Scarcely a meeting without its clinical cases, which undoubtedly is the best manner of keeping up to date. Another thing, too, men do not stay very much out of sorts with one another after the habit of sitting down and breaking bread with each other. Mr. Secretary it is up to you.

#### DR. C. F. COTTERALL

The death of Dr. C. F. Cotterall, of Guthrie, August 10th at his home, took from the Logan County seat one of its pioneer citizens. He was 63 years old, a native of Grant County, Indiana, and a graduate of Ohio Medical College. He came to Oklahoma from Kansas in 1889 and has been engaged in the practice of medicine continuously since that time, being county physician for Logan County at the time of his death. He was for many years in turn city and county physician and at other times a member of the school board. His worth and sterling qualities as a citizen are recognized in having the junior high school named "Cotterall School."

Dr. Cotterall leaves a widow and two sons, one of whom is a medical student at the University of Oklahoma. He also leaves a brother, Judge John H. Cotterall of the federal district court at Guthrie, and a sister, Mrs. Milton Brown, of Dallas. The funeral took place at Guthrie at the Presbyterian Church.

**DR. IRA A. LEE**

Died at Erick, Oklahoma, Dr. Ira A. Lee, on August 1st, 1923, of acute angina pectoris. Dr. Lee was born December 31st, 1876, and was a graduate of the Kansas City Eclectic Medical University of 1904. He was a member of the Beckham County Medical Society, the Oklahoma State Medical Association, the Southwestern Medical Society, and a Fellow of the American Medical Association.

**DOCTOR RICHARD MAY COUNTERMAN**

Dr. R. M. Counterman, for many years located at Eufaula, Stigler and points in McIntosh County, died in St. Louis July 29 from the effects of a brain tumor, with which he had been progressively suffering for some time.

Dr. Counterman was born in Tennessee in 1869, graduating in medicine from the University of Tennessee at Memphis Hospital College of Medicine in 1897, after which he located at Eufaula where he practiced for many years. As president of the Western (Federal) District Board of Medical Examiners, Dr. Counterman performed, no criticism of his official acts ever having been known, and, he was very popular with his associates on the board, from which he voluntarily resigned after a time, it is said largely due to his knowledge of the fact that his work was almost futile and not worth while, due to the laxness in medical examinations and the low grade maintained during that phase of our history. Dr. Counterman's principal characteristics, when he was in his prime and a power in the country in which he lived, were those of his services in a highly satisfactory manner, an almost universal feeling of kindness toward his fellowman, his constant loyalty to his friends and the performance of his life work in extreme good faith. He was what may be termed a "spunky" man, too. When, as a board member, a negro taking the examinations in the Federal Court room at Muskogee, forgot for the moment he was talking to a white man, though he did happen to be a Republican, the negro suddenly awoke to the fact when he met an ink well on the end of his nose, skilfully hurled by the irate doctor. He had been in ill health at intervals for a number of years, about one year ago he began to have a nervous trouble evidenced by convulsive movements, two months ago he became totally blind, and died from the cause above noted.

He is survived by a widow and two children. Burial was had at the Stigler cemetery.

pital, No. 9, Lakewood, N. J.; No. 41, Fox Hills, Staten Island; Later of General Hospital. Reconstruction officer U. S. Public Health Service Hospital No. 61, Fox Hills; Later U. S. Veterans Bureau Hospital No. 61, and in charge Reconstruction U. S. P. H. S. Hospital No. 70, New York. With eighty-five illustrations. Cloth, 443 pages. \$6.50, C. V. Mosby Company, St. Louis, 1923.

Many problems in reconstruction work now confront the American profession and have during and since the Worlds War, so it behooves those having that work in hand to know all they can acquire about it. Dr. Sampson's work here is an interesting advocacy of certain systems known by him to be practical and worth while.

**TONSILLECTOMY.** By means of the Alveolar Eminence of the Mandible and a Guillotine; With a Review of the Collateral Issues, by Greenfield Slude, M. D., F. A. C. S., Clinical Professor and Director of the Department of Rhinology, Laryngology and Otology, Washington School of Medicine, St. Louis, Mo. With 90 illustrations. Cloth, 176 pages. Price \$5.00. C. V. Mosby Company, 1923, St. Louis.

This is an exceedingly interesting and well written book; the chapter on Embryology and Anatomy is clear and practical. A chapter on Physiology and General Pathology of the Tonsil by Arthur W. Proetz, M. D., goes especially into detail with the pathology. Under Indications and Prognosis the author discusses the effects of tonsillar disease on the system and the results, favorable and unfavorable, of tonsillectomy.

Under the heading of Operation, he describes in great detail the technic of the method that bears his name. The book is well illustrated and the author has taken great pains to secure good drawings of the different steps of the operation.

—C. M. FULLENWIDER, M.D.

**THE TONSIL.** Lingual, Faucial and Pharyngeal; with some account of the Posterior and Lateral Pharyngeal Nodules, by Henry A. Barnes, M. D., Instructor in Laryngology, Harvard Medical School; Laryngologist, Massachusetts Eye and Ear Infirmary; Laryngologist, Massachusetts General Hospital; Member New England Laryngological and Otological Society; Member American Laryngological, Rhinological and Otological Society; Member American Laryngological Association. Illustrated. Cloth, 217 pages. Price \$5.00. Second edition, revised. C. V. Mosby Company, 1923, St. Louis.

The first edition of this monograph is well known to the profession. The present edition is revised and enlarged to take note of the changes of opinion concerning the tonsil and the newer operations and procedures for its treatment. Five pages are devoted to the use of X-ray and radium. The chapters on Pathology and Bacteriology and Diseases of the Tonsils are especially worthy of note. The various methods of tonsillectomy are described. The author's preference is for the straight knife and snare dissection. The book is well written and complete.

—C. M. FULLENWIDER, M.D.

**BOOK REVIEWS**

**PHYSIOTHERAPY TECHNIC.** A Manual of Applied Physics by C. M. Sampson, M. D., Formerly of the Physio-therapy Service, Walter Reed, U. S. General Hospital. Formerly Chief of the Physiotherapy Services, U. S. Army General Hos-

**PEDIATRICS.** A Text-Book of Pediatrics by Professor E. Freer, Director of the University Children's Clinic, Zurich. Translated and edited by Julius Parker Sedgwick, B. S., M. D., Professor of Pediatrics, University of Minnesota, Medical School and Carl Ahrendt Scherer, M. D., F. A. C. S., Duluth. 262 illustrations. First Edition in English. Cloth, 917 pages. Price \$8.50.

Philadelphia, 1922. J. B. Lippincott Company.

This splendid work has already had a most favorable reception in Continental Europe, so it comes to America well introduced as an authority on the problems of the pediatrician. The author states that it is primarily intended for the student and general practitioner, therefore, certain duplication of handling necessarily occurs. However, the great scope may be dimly appreciated when it is understood that other well known authorities according, say, as much as one, two or three pages to the acute infections, varicella, pertussis and measles, have had their work greatly overshadowed by the accordance of as many as seven to ten pages by Professor Freer. Early infancy and disturbances of nutrition are given wide space. The author states that "the older physicians" accustomed to the classifications of dyspepsia, catarrh and enteritis, "may be somewhat confused." The discussion of the disturbance of nutrition is based upon the study of the nutritional processes in the light of functional tests. These have led to a new classification and a more rational treatment. Probably the best commendation of the work may be encompassed in the statement that it has been created with the most thorough Teutonic thoroughness, a thoroughness, regardless of past unhappy experiences, which must be admitted and admired with respectfulness.

**PRACTICAL DIETETICS.** With Reference to Diet in Health and Disease by Alida Frances Pattee, Graduate Department of Household Arts, Framingham, Mass., Former Instructor in Dietetics, Bellevue Training School for Nurses, also Mount Sinai, Hahnemann and the Flower Hospitals Training Schools for Nurses, etc., etc. Fourteenth edition, completely revised. Cloth, 646 pages. Price \$2.60 (special rates to training schools, hospitals, etc., where ordered in quantity).

This is a very complete, concise, highly conveniently arranged standard authority for nurses, dietitians and those having the problem of feeding the sick to contend with. The array of great authorities quoted are too numerous for inclusion here. It is an unusually fine work.

**THE DOMINANT SEX.** A study in the Sociology of Sex Differentiation by Mathilde and Mathias Vaerting, translated from the German by Eden and Cedar Paul. Cloth, 289 pages. Price \$3.00. George H. Doran Company, 1923, New York.

This is one of the most remarkable books ever coming to the witer's attention. It is something entirely different, dealing with a subject, or subjects, too often shrouded in inconsistent, puritanical, prudish views, impossible of acceptance at the hands of any man who thinks even a little bit for himself and tries to reason out things according to his lights and the facts of history before him. The Vaertings say "that no civilization can reach its highest development under a monosexual government, and that the ideal government is one in which the sexes are absolutely equal." That we are rapidly passing again to such transitional stage, there can hardly be a doubt. Citations are replete with the fact that in times past, in certain countries, woman, not man, held the ascendancy in all things which vain man now, and for centuries has held as his particular vocation and responsibility. We are inclined to question some of the citations, especially when they come near home to us. For instance, in more than one place the fact that in times past the Creek Indians had a form of social life wherein the woman held the high political offices, conducted all tribal affairs today accorded to the men—that we question—for

the simple reason that there is little or no authentic record left of what really did exist in the loose form called "government," if they called it such, among the Creeks. That in some countries, notably Sparta, the woman for long held the control of all domestic affairs, or shared them as time passed on equality with men, can hardly be questioned, but it is amusing to know at that time woman was the wooer of man, that man adorned himself then as the woman adorns herself today. We can hardly refrain from the sad soliloquy, "Them days is gone forever." However, the Vaertings make a good case for women in that they seem to have proved that when women did hold sway in such things, the moral tone of the community was better. For instance, illegitimacy was a thing unknown. It is a pity, a reflection upon our so-called square dealing, when our treatment of the unfortunate denominated "illegitimate" is considered today.

The book is more than interesting, it is fascinating. It is not vulgar, so anyone except an arant fool may read it with assurance that they will have a fuller understanding of things than before.

**THE INFANT AND YOUNG CHILD.** Its Care and Feeding from Birth Until School Age—A Manual for Mothers, by John Lovett Morse, A. M., M. D., Professor of Pediatrics, Emeritus, Harvard, etc., Edwin T. Wyman, M. D., Instructor in Pediatrics, etc., Harvard and Lewis Webb Hill, M. D., Assistant in Pediatrics, Harvard Medical School, etc. Illustrated. Cloth, 271 pages. Price \$1.75. W. B. Saunders Company, 1923, Philadelphia.

This little work deals with the intelligent care of the infant from birth to school age. What it does states is made very plain, so that a lay person may read it and understand without confusion or difficulty. It suggests articles needed for the baby's coming, the bath, clothing, feeding of various types, wet-nurses, weaning, the home, modification of milk, growth and development, normal and malnutrition, development of special organs, senses and faculties, sleep, rest, exercise and fresh air and finally, diseases, emergencies and medicines.

#### NEW AND NONOFFICIAL REMEDIES

**Insulin.**—An aqueous solution of an active principle from pancreas which effects sugar combustion. The strength of insulin is expressed in "units," one unit being one-third of the amount required to lower the blood sugar below 0.045 per cent. and cause convulsions in a rabbit weighing 2 kg. which has been previously starved for twenty-four hours. The administration of insulin to diabetic dogs and to man in severe cases of diabetes mellitus restores to the body the lost ability to oxidize carbohydrate, and glycogen is again stored in the liver. If insulin is administered at suitable intervals to a person suffering from diabetes mellitus, the blood sugar is maintained at a normal level and the urine remains free of sugar. Fat is also burned and, as a result, ketone bodies do not appear in the urine and diabetic acidosis and coma are prevented. The administration of insulin is indicated in cases of diabetes mellitus which cannot be controlled satisfactorily by dietetic treatment. Overdosage of insulin is followed by the development of serious symptoms which demand immediate treatment. Insulin is administered subcutaneously one, two or three times a day before meals. The dosage required to reduce the blood sugar to the normal level must

be established for each patient by determination of the blood sugar before and after administration of insulin. In cases of coma or severe acidosis, an initial dose of 15 or 20 units of insulin may be given, followed at three to four hour intervals by smaller doses with simultaneous administration of glucose.

**Insulin-Toronto.**—A brand of insulin. It is marketed in 5 cc. vials containing 10 units in each cc., and in 5 cc. vials containing 20 units in each cc. Connaught Antitoxin Laboratories of the University of Toronto, Toronto, Ontario, Canada.

## GENERAL MEDICINE

Edited by Wann Langston, M. D.  
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### INSULIN IN THE TREATMENT OF SEVERE DIABETES.—Dr. Alexander McPhedran and Dr. F. G. Banting. *International Clinics*—11. Series 33-1.

A case of diabetes mellitus is considered severe when the patient is unable to metabolize five hundred calories over and above his basal requirements. Patients remain on a basal requirement diet for a week, careful history and physical examination made, blood sugar determinations and urinalysis done to determine the carbohydrate tolerance, which is essential before beginning insulin treatment. The ideal treatment is to balance the increased diet over and above the patient's tolerance with the artificial supply of internal secretion.

A unit of Insulin is the amount required to reduce the blood sugar of a rabbit fasting eighteen hours from its normal level of .120 per cent to .045 per cent, causing the metabolism of approximately 2.5 grams of carbohydrate. The dose of Insulin is calculated on the height of the blood sugar and the average number of grams excreted daily. It is most advantageously given twenty minutes to half an hour before meals.

It is advisable to render patient sugar free on their basal requirement, then increase diet and Insulin coincidentally until the required diet is reached, and urine sugar free.

The symptoms of Insulin shock or hypoglycemic reaction are pathognomonic and always recognizable by patient; they are pallor, sweating, stupor, increased pulse rate, peculiar sensations of impending danger, incoherence of speech, tremulousness and finally coma and convulsions.

Elevation of blood sugar by oral administration of glucose, if patient is conscious, or ten or fifteen minims of epinephrin followed by glucose, if unconscious, immediately relieves the condition.

Insulin is not a cure for diabetes—it is a treatment. It enables the diabetic to burn sufficient carbohydrates so that fats are oxidized and acidosis prevented, enables glucose to be stored as glycogen by the liver, and the addition of fats and proteins to the diet in sufficient quantities to provide energy for the economic burdens of life.

### THE ROUTINE TREATMENT OF DIABETES WITH INSULIN.—Elliott P. Joslin, J. A. M. A. 80—No. 22—158-1583.

Successful treatment of diabetes with insulin depends upon "adherence to a diet which will keep urine sugar free, avoidance of over or extreme under-nutrition, and a method of life compatible

with the strength such diet affords."

The author believes insulin can be and should be used by the general practitioner. It is no more dangerous than morphine, and has the advantage of giving a warning train of symptoms of overdosage.

The author's method is as follows: The calories (of usual diet) should be reduced by marked restriction of fat, the protein limited to one gram or less per kilo of body weight, and carbohydrates 200 grams or less, not to exceed the amount in patient's previous diet. This diet is gradually reduced, at the same time giving insulin, beginning with one unit, the second dose two, the third three, up to five units, before meals. Diet and insulin then increased together until patient remains sugar free on a satisfactory maintenance diet. When it is necessary to omit insulin through lack of supply, patient must go to bed and restrict diet one-third.

**Treatment of Coma:** Patients are taught whenever ill to (1) go to bed; (2) keep warm; (3) take a glass of hot water, tea, broth, orange juice or oatmeal gruel every hour; (4) empty bowels with an enema, and (5) call a physician, who, if he finds acidosis, will give insulin, caffeine and digitalis, and wash out stomach. In coma, he gives ten units of insulin every hour for two to four doses, and then every other hour for four doses more, if necessary.

The author believes insulin may be discontinued in a small fraction of cases.

### OBSERVATIONS ON USE OF ILETIN IN DIABETES MELLITUS.—W. H. Olmstead, M. D. and S. H. Kahn, M. D.—*J. A. M. A.* Vol. 80. Pp. 1903-1907, June 30, 1923.

The authors summarize the observations of the discoverers of insulin as follows:

(1) Blood sugar is reduced and glycosuria disappears.

(2) Glycogen is stored in diabetic animals and the respiratory quotients are raised, showing the burning of sugar.

(3) Ketonuria rapidly disappears, and patients in coma may be successfully restored to consciousness and life.

(4) An overdose of insulin in animals produces violent symptoms of a convulsive nature, followed by coma and death. The antidote for this state is glucose.

The authors report the results of the use of insulin in more than forty cases. They find the disappearance of sugar from the urine is proportional to the sugar present and the dose given. All diabetics may be rendered sugar free if enough extract is used. If administration is stopped, sugar promptly reappears in a few hours. Insulin causes a prompt and marked lowering of blood sugar—the same is true of ketonuria. Nitrogen balance is rapidly established in severe cases. With insulin, it is unnecessary to force metabolic rates and under-nutrition so low as formerly. After administration of insulin, patient notes a return of energy, frequently a return of sexual power. Besides increasing the caloric tolerance, insulin is invaluable in coma and severe infections complicating diabetes.

"The use of insulin, more than ever before, lays a great responsibility on the physician to train the patient in the knowledge of dietetics. Food and insulin must be carefully balanced so that the blood sugar will be as near normal as possible. Under these conditions the fullest opportunity is given for a gain in tolerance."

# INSULIN IN THE TREATMENT OF DIABETES MELLITUS.—F. G. Banting, M. D., W. R. Campbell, M. D., A. A. Fletcher, M. D. *Journal of Metabolic Research*, 11., 5-6, pp. 547-604, Nov.-Dec., 1922.

"In this disease (Diabetes Mellitus) the fundamental defect is the failure of the pancreas to produce an adequate amount of insulin. As a result, there is failure to metabolize or store carbohydrate, and glycosuria occurs. The lack of sufficient carbohydrate in the process of combustion is the cause of failure to burn fats completely, and ketosis and ketonuria ensue."

Insulin is supplied by the subcutaneous injection of one, two or three doses daily, before meals, depending upon this requirement: The dose is prescribed in units, one unit being equivalent to 1-1.5 gm. of glucose. During a preliminary period of observation the amount of sugar excreted on a basal diet is determined, and dose estimated. If glycosuria persists after a few days, a small additional amount is given. In certain cases the pancreatic rest attained by diet and insulin may result in improved tolerance and the dose reduced.

Insulin in excess of requirement causes hypoglycemia, which may be controlled by increasing diet or decreasing dose of insulin.

Detailed case reports are given illustrating the following points:

(1) Relief from glycosuria and ketosis with apparent restoration of mental and physical health, with recurrence when insulin treatment is discontinued.

(2) When the blood sugar is high, a larger amount of insulin is required to render patient a glycosuric than to maintain him in this condition.

(3) Apparent increase in carbohydrate tolerance.

(4) In some cases large amounts of insulin may be given without fall in fasting blood sugar levels or cessation of glycosuria.

(5) Prognosis in children and young adults rendered more favorable.

(6) Danger of hypoglycemia with patient on high caloric feeding.

The authors point out:

(1) No other disease causes so great a derangement of metabolism of all foodstuffs.

(2) In mild cases adequate control is maintained by modern dietetic methods.

(3) When the production of insulin falls below a certain level, artificial administration in addition to dietetic treatment furnishes the only hope.

(4) Such patients without exception are benefited by the treatment.

(5) The daily administration of insulin does not result in great inconvenience and provides relief from most of the symptoms associated with the disease.

(6) Blood sugar can be maintained at any desirable level, and diet raised to any desired amount, but proper balance of protein, carbohydrate and fat must be secured.

(7) There is striking improvement in the mental and physical condition of patient.

(8) Increased nutrition calls for increased insulin and increased food.

(9) It is not advisable to increase diets beyond such levels as satisfy reasonable normal demands of energy.

(10) With insulin treatment it is unnecessary to maintain extreme under-nutrition as formerly.

(11) Rest for a weakened organ is a fundamental therapeutic principle. A measure of rest can be furnished the pancreas by dietetic control;

greater measure by insulin administration, and it appears that a proportion of patients regain a measure of increased power of carbohydrate utilization, which persists as long as excessive demands are not made on the islet tissue.

(12) Complications such as tuberculosis, pyogenic infections and operative conditions have a much better prognosis under insulin treatment.

(13) There is an unusually high tolerance for insulin in septic conditions, especially gangrenes or infective cellulitis of the leg.

(14) Given a sufficient carbohydrate intake, all degrees of ketonuria may be restored to normal by insulin administration.

(15) It is too early to prognosticate remote results of insulin treatment.

## INSULIN IN TISSUES OTHER THAN PANCREAS.—C. H. Best, M. A. and B. A. Scott, M. A.—*J. A. M. A.*, 81, No. 5—August 4, 1923.

The Authors state: "We have been able to prepare active extracts from the submaxillary, thymus and thyroid glands, and from liver, spleen and muscle tissues. These extracts have been repeatedly tested on normal rabbits and have consistently produced marked lowering of blood sugar of these animals. A large dose produces typical insulin convulsions in the rabbits. The convulsions are alleviated by the administration of glucose." "Insulin is present in every tissue we have investigated." They believe insulin is excreted in greater amount by pregnant women than by normal men.

## INSULIN TREATMENT OF POSTOPERATIVE (NON-DIABETIC) ACIDOSIS.—William Thalhimer, M. D.—*J. A. M. A.*, 81, No. 5, Aug. 4, 1923.

The author reports three cases of postoperative acidosis treated with insulin resulting in almost immediate cessation of symptoms. His method is to give 300 to 500 c.c. of 5 per cent glucose solution intravenously, followed immediately by subcutaneous injection of five to ten units of insulin. He believes insulin may be of use in the ketosis of starvation and vomiting of pregnancy. He concludes "Injections of insulin and glucose solutions in a small series of cases of postoperative vomiting and ketosis cleared up these conditions rapidly; much more rapidly than has been accomplished in my experience with injections of glucose alone."

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
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## CLIMATE.—Leroy S. Peters, Albuquerque, New Mexico. *American Review of Tuberculosis*.

Little, if any, scientific work to prove or disprove the value of climate has ever been published. Up to a few years ago patients were advised to go West and sought it. With such advice results were naturally disappointing. A few worthy institutions soon showed the profession what good results could be obtained in one's home climate and in the revulsion of feeling, the more honest members of the profession were unwilling to grant any value to climate. The advertising of their special locality by commercially minded Southwestern doctors, combined with the over enthusiasm of recently arrived Eastern physicians, only

served to still further separate the honest men of both sections.

It is an open question whether or not the changes taking place in the blood with increasing elevation are not all physiological and necessary for the maintenance of metabolism and have little, if any, effect on the lung lesions. The fact that the results of treatment in the low elevation of the Southwest are as good as in the higher altitudes would seem to bear out this theory.

The author personally considers many of the so-called disadvantages of the Southwest largely figments of the imagination. He has never noted any harm from the dust storms, disagreeable as they are. The summers of New Mexico and Colorado are very comfortable. He considers homesickness largely the problem of the hopeless patient rather than the one to whom the change offers a chance of cure. As to the danger of hemorrhages, little is known about why patients have or do not have hemorrhages, and therapeutic elevations have no influence one way or the other on their occurrence. He believes that after an arrestment has been obtained, although a patient may be slightly safer in the West, there is no reason why he should not return home.

There is a very real problem existing in the ignorance of the Eastern physician regarding conditions in the West. He forgets that the greater number of Western physicians have been educated in Eastern or middle western schools and are human beings like himself. When this ignorance and prejudice have been overcome, Eastern men will cease advising their patient to "go West and rough it, but stay away from the doctor," thus throwing away their patient's chances in a way which can only be considered criminal.

The author is an ardent believer in climate. He is convinced that in well conducted institutions the results are 10 to 15 per cent better than in Eastern Sanatoria. But he also believes that the question of climate can be summed up in one word, luxury. It is far more important that the patient be placed in a home State Sanatorium where proper care can be given him, than that he be sent to the best climate on earth where he must live under poor conditions and perhaps work to obtain the necessities of life.

He considers it advisable to make an honest effort to treat the patient at home. If at the end of four or five months' careful supervision he shows no improvement, or his general condition is worse, intelligent climate change should be advised. The fact that nearly 50 per cent of the tuberculous die within six months of arrival is not an argument against climate, but rather a sad commentary on the advice to a dying consumptive by supposedly intelligent Eastern physicians.

There are certain types, such as patients with marked amount of fibrosis, with well developed kidney lesions, or with uncompensated heart lesions, that do not do well at high elevations. When a change is advised, these patients should be sent to low points, such as Tucson or Phoenix, Arizona.

The author attempts to prove nothing from a scientific standpoint. His sole object in this paper is to attempt to unravel the tangle relative to climate and tuberculosis; a tangle made by the ignorant physician, both East and West, and by his equally dangerous brother, the commercial doctor. Men are needed with time and money to do real climatic work; to show why better results are obtained here than elsewhere. At present, we have only clinical impressions which do not convince the skeptical until the impressions gained by men working in a favorable climate are possible of

scientific demonstration. The profession had better be done with petty differences and advise patients intelligently, regardless of their locality.

#### MEDICINE'S DUTY TOWARD THE TUBERCULOUS PATIENT.—F. M. Pottenger, New York Medical Journal, January 4, 1922.

Medicine owes to tuberculous patients especial duty as compensation for past neglect. It is only in the past twenty-five years that tuberculosis has been sufficiently understood to make an intelligent approach to its many problems possible.

Few other diseases are met with such frequency, and there is little excuse for the relative lack of interest in it. While little is known of effect of treatment in other diseases, we do know that there is a time early in nearly every case of clinical tuberculosis when, if proper treatment is instituted and carried out, the patient has seventy-five or more per cent chances of an arrestment.

Every general practitioner should be able to diagnose, or at least suspect early tuberculosis, and to secure aid of a specialist who can diagnose it, as the burden of conquering tuberculosis falls upon him. The chief difficulties of the physician are that he does not take sufficient time to study and examine cases, and is looking for gross signs such as are found only in advanced tuberculosis. It is so common that its presence in any person should not cause surprise, and its possibility should always be in the physician's mind.

There are three causes operating to produce symptoms in early tuberculosis: (1) Toxins acting on nervous system and endocrine glands. (2) Inflammation in lungs producing reflex symptoms in other organs and (3) disease process itself. Tuberculosis should be suspected when patient gives a history of being run-down accompanied by some of the following symptoms: Loss of weight, hoarseness, cough, blood spitting, pleurisy or frequent colds. Rise of temperature is not necessarily present and too much stress should not be laid upon its presence or absence. Careful history taking and intelligent analysis of symptoms are the most important features in diagnosis, and stethoscope or x-ray must not be depended upon too much. When diagnosis has been made, sufficient and intelligent treatment must be instituted at once as the best results depend upon early diagnosis and immediate intelligent treatment.

Since all patients can not go to a sanatorium, general practitioners must master the principle of treatment. Various remedies have been suggested but the generally approved treatment is so simple as to be difficult to carry out. It is based on physiological principles which aid patients in building up a good nervous and physical equilibrium. Tuberculin or pneumothorax have definite places and distinct value and certain climates make treatment easier, but fortunately these are not the principle factors as they are out of reach of many.

Rest in bed is the most important and helpful measure and should be continued until all periods of active toxemia are past and patient can exercise without causing toxic symptoms. Food is very important. Patients need full, well balanced but not excessive diet. Exercise becomes an important part of treatment when time for its employment comes and must be prescribed very cautiously and systematically carried out until physical vigor is acquired. It must vary with conditions and strength of the individual.

Everything that is done for tuberculous patients must be prescribed in detail and carried out with

care and exactness. Heliotherapy is valuable and may be prescribed by any physician. Exposure must be small and short at first and gradually increased. It is not suitable for patients with rise of temperature. Some adjunct may be used to give what seems to the patient an intelligent reason for seeing the physician but the real value of his visits is a sincere and intelligent interest in progress of patient and in helping to keep patient busy and interested so that he will co-operate whole-heartedly.

There are many measures of use in making advanced patients more comfortable as well as aiding them in fighting this disease. Measures for relief of cough, nervousness, etc.

All patients suffering from chronic toxemia of tuberculosis have some degree of acidosis and the relief of this condition is especially important. Alkalines such as soda bicarbonate and magnesium have been used by mouth, intravenously and by Murphy drip very successfully. The beneficial effects can be readily understood from the works of Fisher, and Woodyatt and Sansum in which they show the detrimental effects produced upon the organism when the colloidal substance of the tissues take up large quantities of water thus reducing the free water of the body. Their work shows that the presence of free water in the body is an essential of healthy cell activity. The author concludes that aside from prescribing a course of treatment, it is the physician's duty to instruct patients in care and disposal of sputum and all other measures for prevention of the spread of infection. These should be especially emphasized in regard to children. It is the duty of the specialist to assist the general practitioner by making the subject less intricate and by helping to dispel the pessimism which prevents him from doing what he should for those suffering from this disease.

#### SYPHILIS OF THE LUNGS.—The Boston Medical and Surgical Journal—Nathaniel K. Wood, November 1916.

The finding of extensive dullness of the lungs during routine examination in cases that do not show tubercle bacilli in the sputum has prompted the author to collect data that might point to some other cause than tuberculosis for such dullness. The fact that the recognition of *spirocheta pallida* and the discovery of the Wassermann test have proved pathological findings, not heretofore recognized as such a manifestation of syphilis, caused the author to question if sufficient evidence could be found clinically to justify a diagnosis of syphilis of the lungs.

From twenty-two cases, he selected a series with histories suggestive of syphilis, whose physical examination showed definite lung impairment. If the Wassermann proved positive, sputum examinations were made and von Pirquet tests tried. If these proved negative, radiographs of the chest and long bones of the lower leg were taken. He was able to select seven cases showing definite histories, definite lung impairment, positive Wassermann and negative sputum and von Pirquet tests. To these were added four cases not meeting these requirements. One had a few tubercle bacilli in the sputum, Gaffky No. 2, but had in addition a markedly positive Wassermann and definite radiographic findings. The other three were children upon whom the diagnosis of tuberculosis had been made and who had been carefully treated for it several years. Repeated examinations of their sputum have shown no tubercle bacilli, but their family histories were strongly suggestive

of syphilis. No Wassermann tests or radiographs were made upon them but they are cited because of the marked effect which mixed treatment had upon them.

In discussing his findings, the author decides that there is strong evidence of syphilis in these individuals; previous history of sickly children born into families where there has been a series of miscarriages, dead-born children and early infant deaths; physical signs of general glandular enlargement, Hutchinsonian or badly decayed teeth, scars and skin eruptions; positive Wassermann and positive radiographic findings in three cases, suggestive in three others of syphilitic bone and circulatory lesions. There is equally strong evidence of disease of the lung; marked dullness throughout both chests, poor respiration, varying numbers of moist and dry rales confined more to the bases than to the apices of the lungs, history of cough and expectoration.

These cases have been under treatment one year. In addition to simple hygienic treatment such as early hours and good food, they have had Tr. nux and genitan before meals and mixed treatment after meals. One had injections of mercury for five months. All but one have worked steadily. The results of treatment have been small gains in weight, great improvement in general physical condition, marked diminution in tendency to take cold and improvement in chest signs such as disappearance of rales, deeper and steadier respiration and diminishing of dullness. In the one case having tubercle bacilli in the sputum, none were found subsequent to six weeks of mixed treatment. When this was stopped he gradually lost ground, regaining it at once upon resumption of mixed treatment. The three children made marked improvement in the year of mixed treatment in contrast to the slow improvement under usual tuberculosis treatment during the previous year.

The author first establishes the fact that there has been disease of the lungs in these cases. This is proven by the respiratory symptoms and radiographic findings. These conditions occurred in individuals where the only signs pointing toward tuberculosis were the physical findings of the chest examination. All other signs of tuberculosis were lacking. On the contrary, there was good evidence of syphilis, family and personal history, physical examination and Wassermann tests all point to it.

Finally, the evidence of treatment favors the diagnosis of syphilis. These patients all worked, neither living or sleeping out of doors but having instead tonic treatment, together with anti-syphilitic treatment. That they made definite improvement is clearly shown and that they retrograded when they stopped treatment is equally certain. In the case of the three children the improvement was most marked and can scarcely be called a coincidence or the result of a cure of the tuberculosis. This improvement was delayed in that case from which the mercurial treatment was longest withheld. Most important, the local condition of the lungs improved as definitely under the syphilitic treatment as did the general condition.

The author decides, however, that his evidence is far from conclusive. For often tubercle bacilli cannot be demonstrated in the sputum of patients who have later been proven to have tuberculosis. The number of cases which he has been able to collect have been too few, the difficulties of controlling them too great; and the lack of radiographic confirmation of demonstrable lesions in the lungs themselves, leaves him with the result

of treatment as the strongest link in his chain. This is far too weak a link to overthrow the strong evidence of the pathologist that syphilis of the lungs is very rare. He realizes that if there is such a thing it must be demonstrated on the autopsy table. If, however, the facts of medical treatment and clinical observation continue to point toward such an infection of the lungs, as he believes they will, greater efforts must be made to find pathological corroboration.

### EYE, EAR, NOSE AND THROAT

Edited by Jas. C. Braswell, M. D.

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**TUBERCULIN AS A THERAPEUTIC AGENT IN CERTAIN FORMS OF KERATITIS.**—Reeder, W. G. Illinois M. J., 1923, xliii, 241.

The author gives in detail the histories of five cases of phlyctenular disease of the cornea in which tuberculin was used.

The diagnostic dose of old tuberculin was 1 mgm. In every instance a local, a focal and a general reaction were obtained within forty-eight hours: a negative phase in which the eye became worse for a few days was followed by a positive phase which went on to cure or distinct improvement. In some cases several doses of 1 mgm. were given, and usually there was no eye flare-up following the repeated doses.

The author states that focal activation must have its negative stage followed by a positive stage if therapeutic results are to be obtained. Lesions actively in the negative stage may not be benefitted by protein injection.

In the author's opinion, the treatment is specific.

**HEADACHE FROM THE OPHTHALMOLOGICAL STANDPOINT.**—Griscom, J. M. Pennsylvania M. J., 1923, xxvi, 359.

The study of a case of chronic headache is not complete without a refraction under cycloplegia. Not all headaches are due to eye strain, and in the study of each case it must be borne in mind that the etiology of headaches is not so simple as is sometimes believed. Persons with toxemia are more likely to suffer from eye strain than normal persons. On the other hand, small uncorrected errors of hyperopic astigmatism may be the cause of functional nervous disorders. While it is not possible to state the percentage of headaches due to eye strain, errors of refraction have a place in the vicious circle of cause and effect, and their elimination is important.

**INFECTION AND INFLAMMATION OF THE INVESTING TISSUES OF THE TEETH AND THEIR RELATION TO THE MAXILLARY SINUS.**—Brown, G. B. Kentucky M. J., 1923, xxi, 149.

Infections of the tissues around the apex may travel to the antrum by direct extension, by necrosis of the bone and by the lymph and blood streams.

Cases of infection of the antrum of Highmore resulting from the extraction of teeth may be divided into three groups: (1) Those in which the dental roots lay within the antrum and on extraction left a fistula through which the infection entered through the mouth; (2) those in which

the root extended to, but not through, the periosteum and mucosa of the antrum, the soft tissues become infected after extraction, and a probe inserted for diagnostic purposes accidentally penetrated the cavity of the antrum; and (3) those in which the wall and lining of the antrum were penetrated by extraction of the tooth.

Infection does not occur in all cases of perforated antrum, but when food is forced through an open fistula it is practically certain to develop. This condition will tend to keep the sinus open and retard healing. When drains are inserted, a permanent fistula usually results as the edges of the sinus become lined with a new form of epithelial tissue.

A fistula following extraction should be closed as soon as possible. If the antrum is infected an opening should be made through the nose to promote drainage.

### GENERAL SURGERY

Edited by G. A. Wall, M. D., F. A. C. S.

303Palace Bldg., Tulsa

#### OLD MASTERS.

Samuel David Gross of German extraction, was the greatest American surgeon of his time. He was born in 1805 and died in 1884. He was professor of surgery at Louisville, Ky., from 1840 to 1856, and at the Jefferson Medical College, Philadelphia from 1856 to 1882.

He was a prolific writer on medical and surgical subjects. He wrote the first comprehensive treatise on pathological anatomy in English, (1839). This book passed through three editions and was highly thought of. Gross also wrote an authoritative work on genito-urinary diseases (1851), containing the first account of the distribution of urinary calculi; the first systematic account of foreign bodies in the air passages (1854); and a two volume system of surgery (1859). His works were extensively illustrated. He wrote accurate histories of Kentucky and American surgery, and biographies of Drake, Hunter, Mott and others.

He invented many instruments, and undertook original research upon the effects of manual strangulation and wounds of the intestines of animals in 1843. He introduced deep sutures in wounds of the abdominal wall, performed laparotomy for rupture of the bladder and myotomy for wryneck in 1873.

He had sturdy personality and a stalwart physique. He was considered the greatest German-American of all time.

**LIABILITY IN FRACTURES.**—S. Med. Journal, Vol. xvi, 492.

Bad results in cases of fractures and bone diseases are seldom buried, but are a living monument to one's mistake or ill-luck. Often the bad result is not the fault of the surgeon; but unfortunately, sometimes it is. By observing certain simple rules, much of the difficulty would be avoided.

In fractures one should remember that swelling always occurs after manipulation or "setting," and instructions should be given the patient to notify the physician if the bandages become too tight as evidenced by severe pain, continuing. Twenty-four hours after the application of any splint the patient should be seen again and the bandages readjusted, if necessary. Severe pain should not persist after the fracture has been properly set

and dressed.

An X-ray should always be taken after the fracture has been set and the dressings applied. The public expects it, and juries consider it essential. It is worth the trouble and makes one sure that he is right.

Many mistakes are made in the name of "rheumatism" when later we find the whole shaft of the bone destroyed by an osteomyelitis. An acute osteomyelitis is a surgical emergency and to overlook such a case or call it "rheumatism" is just as dangerous as calling an acute appendicitis an attack of "colic."

There are a certain number of cases that will turn out badly, no matter how skillful the treatment and upon these the surgeon is just as liable to malpractice as if the case were handled inexpertly. Very careful handling of these cases and a careful diagnosis will aid in reducing the surgeon's liability. It is no disgrace to be sued for malpractice but it is very inconvenient, and a great waste of time, energy and money, and should be avoided to the best of our ability.

#### TREATMENT OF CARBUNCLE.—Rieder: Deutsch Zeitsch f. Chir. Leip. Reported in the Journal A. M. A.

He makes the usual ample crucial incision and loosens up the edges a little, but leaves the depths unmolested, and tampons the whole infected area with a strip of gauze impregnated with diphtheria antitoxin or horse serum. He claims that the process is arrested at once (I wonder). The necrotic mass is generally spontaneously expelled in 24 hours, and granulations form in the depths on the second or third day, and the skin sinks down on the new cells. With a furuncle a single subcutaneous injection of 1. C. C. of horse serum in the centre, without an incision, generally induces the spontaneous expulsion of the "core."

He has treated with this combined method 23 carbuncles, including five on the lip or cheek. The action of the horse serum in loosening up and promoting expulsion of the core is still a mystery. As no vessels in the depths are opened, the micro-organisms are not forced into the circulation.

#### EARLY SYMPTOMS OF BREAST CANCER.— Rountree, C.: British Medical Journal, May 5, 1923, p. 747. From the J. A. M. A.

The symptoms which Rountree puts first in diagnostic importance, is adhesions between the growth and the skin overlying it—not the coarse and obvious infiltration met with in advanced cases, but a much more delicate involvement, resulting in a faint dimpling of the skin which is often of so slight a degree that it may be only visible after a careful examination in suitable conditions of light. In its earliest stages, it can be made to appear by grasping the breast on each side of the suspicious nodule and trying to push the skin away from the tumor. By then looking along the surface of the breast it may be possible to perceive a slight irregularity in the contour not hitherto apparent. If this sign be evident—and it nearly always is when carefully looked for—a definite diagnosis of malignancy may safely be made with the utmost confidence, irrespective of the presence or absence of retraction of the nipple, alteration in the size and shape of the breast, enlargement of the glands, or any of the other classical signs of cancer. Absence of adhesion to the skin does not necessarily indicate that the tumor is benign, for the growth may be too

small, or, if the breast be large and fat, the distance to the skin may be too great.

He favors the Handley operation adapted to the individual case.

#### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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The American Orthopedic Association held its thirty-seventh annual meeting in Rochester, New York, on June 7 to 9, and an unusually instructive program was carried out.

Among the most interesting papers was one by Dr. Willis C. Campbell of Memphis, Tenn., who has devised a new operation to prevent drop-foot. He makes an incision in the posterior part of the foot exposing the os calcis, astragalus and tibia and builds up a pyramid of bone fragments, which he expects to form an exostosis on the os calcis immediately back of the astragalus and the tibia in such a manner that it will mechanically prevent the foot from dropping down past the right angle. Lantern slides and reports of cases convinced the audience that he had something worth while.

Dr. William O'Neill Shermann, of Pittsburg, read a paper on "Compound Fractures of the Femur and Open Fractures Into Joints," in which he resurrected the policy of metal plates and screws with the "Lane Technique." He gave as his reason for using these plates so constantly, that he could obtain perfect reduction and union in the shortest extent of time and that his functional results were, in general, much more perfect than they were if the external splint alone was relied upon. He claims originality for the screws and plates which he uses and lays special emphasis upon the fact that he does not use a pointed screw, but instead, one that is the same diameter throughout. He bores the hole in the bone and makes the threads in the bone the same as those of the screw and claims that when this screw is inserted into these snug-fitting threads, it will not pull out or become loose. He always removes his plates after a few weeks.

This paper was very hotly discussed. Some of the surgeons present stated that they thought the use of metal plates had been discarded forever and that it was a mistake to openly advocate their use, because of the many dangers it involved. Others upheld Dr. Shermann's point of view—that if in the severe crushing fractures he was treating he could obtain practically perfect functional results through his expert use of this technique, that others could well aspire to do the same thing.

Dr. Russell A. Hibbs of the New York Orthopedic Hospital, gave a full and complete report of the first fifty-nine cases of scoliosis treated by fusion at the New York Orthopedic Hospital. In his operation he differs from the Albee Inlay Graft, in that he actually fuses the spinous processes to each other by means of macerating them into small bits of bone. He keeps the patient in a special bed with straps and traction applied in direction which will tend to relieve the deformity of the spine. He then makes an incision over the area at which the curvature is most marked and produces an ankylosis of the spinous processes of the vertebrae which he has decided to stabilize to prevent progress of the deformity. With special instruments he chisels the spinous processes into thin chips of bones and cures the lateral articulations so that when the patient recovers there is firm

union of all these parts. A spinal jacket is worn for several months after the operation. Some of the cases shown in lantern slides had been done several years ago and grown to adult life since the operation. The progress of the deformity was not only apparently checked but spinal movement was surprisingly good, in that the ankylosis did not prevent forward bending to the floor and activity in the way of gymnastics.

Dr. MacKenzie Forbes, of Montreal, has been doing a very similar operation for about the same length of time and had about the same extent of success as Dr. Hibbs in this method of treatment.

Dr. Royal Whitman of the Hospital for Ruptured and Crippled in New York stated that they had been doing a number of these cases recently and felt encouraged with the treatment.

Dr. Denuce, of Bordeaux, France, was on the program for Treatment of Congenital Dislocation of the Hip, but failed to come on account of illness.

### CURRENT COMMENT

By The Editor,

Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, what ever or wherever it may be. Contributions are invited from our members.

CHOCTAW BEER as a kidney remedy landed a Tulsa resident into two things, the limelight and the county jail. "You musta had kidney disease mighty bad, old man," said one of the deputies, as he struggled back from a nearby ravine with a forty gallon barrel of "Choc."

THE VIEWS OF TWO PRESIDENTS. Our civilization cannot survive materially unless it be redeemed spiritually. It can be saved only by becoming permeated with the spirit of Christ and being made free and happy by the practices which spring out of that spirit.—Woodrow Wilson, in Atlantic Monthly.

I tell you, my countrymen, the world needs more of the Christ; the world needs the spirit of the Man of Nazareth. If we could bring into the relationship of humanity, among ourselves and among the nations of the earth, the brotherhood that was taught by the Christ, we would have a restored world.—Warren G. Harding in an Alaskan speech.

WOODROW WILSON'S CHARACTER. That Mr. Wilson was not the cold icicle so many people seem to think he is, is evidenced by abstracts from Mr. Joseph Tumulty's book, "Woodrow Wilson As I Knew Him." Particularly casting insight into Wilson's attitude toward the smaller things of life, those that really count in the sum total of estimating a man are these:

An old German harrassed by the irksome restrictions imposed by war time conditions was recipient of the notice noted below. Mr. Wilson, in a note to Attorney General Gregory had this to say:

"My Dear Gregory: The enclosed letter from his wife was handed to me this morning by a rather pitiful old German whom I see constantly looking after the flowers around the club house at the Virginia Golf Course. I must say it appeals to me, and I am sending it to you to ask if there

is any legitimate way in which the poor old fellow could be released from his present restrictions.

In haste,

Faithfully yours,

WOODROW WILSON."

That he could be harsh in the extreme is evidenced by his action when thoughtless news writers, especially the Hearst papers, continually picked upon and criticised the smallest happenings and incidents concerning the private affairs and life of the Wilson family. This was especially rife as to the illness of Mrs. Wilson, the reported engagements of Miss Margaret Wilson to this or that man. Mr. Wilson met the newspaper coterie and had this to say to them:

"I hope that you gentlemen will pardon me for a personal word this morning. I have read the stories that have appeared in certain newspapers of the country containing outrageous statements about the illness of my wife and the marriage of my daughter. I realize that as President of the United States you have a perfect right to say anything you damn please about me, for I am a man and I can defend myself. I know that while I am President it will be my portion to receive all kinds of unfair criticism, and I would be a poor sport if I could not stand up under it; but there are some things, gentlemen, that I will not tolerate. You must let my family alone, for they are not public property. I acquit every man in this room of responsibility for these stories. I know that you have had nothing to do with them; but you have feelings and I have feelings, even though I am President. My daughter has no brother to defend her, but she has me, and I want to say to you that if these stories ever appear again I will leave the White House and thrash the man who dares to utter them."

When it was proposed that he extend executive clemency to Debs, he had this to say:

"I will never consent to the pardon of this man. I know that in certain quarters of the country there is a popular demand for the pardon of Debs, but it shall never be accomplished with my consent. Were I to consent to it, I should never be able to look into the faces of the mothers of this country who sent their boys to the other side. While the flower of American youth was pouring out its blood to vindicate the cause of civilization, this man, Debs, stood behind the lines, sniping, attacking, and denouncing them. Before the war he had a perfect right to exercise his freedom of speech and to express his own opinion, but once the Congress of the United States declared war, silence on his part would have been the proper course to pursue. I know there will be a great deal of denunciation of me for refusing this pardon. They will say I am cold-blooded and indifferent, but it will make no impression on me. This man was a traitor to his country and he will never be pardoned during my administration."

It seems that the above little insights to Mr. Wilson's real self should disabuse the minds of so many people who did believe him to be cold-blooded, callous, and indifferent to humanity.

### KEEP HER AWAY FROM THE FIVE GRACES.

"What do you think, I sent my wife to see the 'Three Musketeers,' she came home and triplets was the result."

"My goodness, man, what will I do? I allowed mine to go see the 'Four Horsemen' last night!"

—Muskogee Times-Democrat.

DISEASE vs. CRIME. "Crimes in the future are to be considered as a disease."—Dr. Martha Welton, San Diego.

The doctor says that crime's disease,  
So we'll explain it, if you please.  
For he who takes booze on a trip,  
You all must see, has got the grip,  
Or else infection of the hip.

While he who hacks one with a cleaver,  
No doubt is touched with scarlet fever.  
And one who sarts a-raising Cain,  
By trying to break police in twain,  
Must have paralysis of the brain.

### THE STINGIEST MAN I EVER KNEW.

#### Cheaper to Hire a Little Boy.

At last Uncle Hiram and Aunt Anne had come to the doctor "to see about Hiram's eyes." Lack of funds had not delayed the visit. They still held the broad and fertile acres which they had acquired in fifty years of wedded life filled with toil and a frugality that had given them a country-wide reputation for stinginess. Uncle Hiram was known to carry a substantial balance in the local bank.

No extended examination was necessary to diagnose the trouble. Both eyes were affected. Cataracts had brought Uncle Hiram to the verge of total blindness. But the doctor was optimistic.

"We can fix you up, Mr. Peters," said he. "And it won't be a very serious operation, either. It will mean a trip to Nashville, a few days in the hospital, and careful attention for a while. Then we'll have you seeing as well as you did before this trouble began. I have had a dozen or more cases of this kind, and in practically every case we have been successful in restoring sight."

How did Aunt Anne receive such joyful tidings? Here was a modern miracle of science. Her companion of fifty years could be rescued from what had seemed inevitable blindness. True, Uncle Hiram was feeble, and with sight restored could not labor as he had in days gone by, but he could be saved from the utter helplessness of one losing sight at his age. He need not sit in darkness awaiting his summons.

Get Aunt Anne's reaction:

"And what will it cost, Doctor?"

"Oh, that's difficult to say exactly, Mrs. Peters. I judge that a hundred dollars will cover all expenses, and get rid of both those cataracts."

"My! But, Doctor, don't you think it would be cheaper to hire a little boy to lead him around?"

G. W.

—American Magazine, August, 1923.

### MORE TRUTH THAN POETRY.

By S. E. Kiser.

He never has followed the cracksman's trade,  
And he never has snatched a purse;  
He never has stabbed with a cruel blade,  
Or uttered an awful curse;  
He shuns the tricks of the common cheat,  
And he bows to the law's commands,  
But children are toiling in dust and heat  
For profits that reach his hands.

He frowns on the gambler and shuns the ways  
Of the crook with the phoney deck;  
And not for money and not for praise  
Would he hand you a worthless check;  
Honor, he claims, is his second name,

He guards it with much concern,  
But he never has ceased to be glad to claim  
The profits that children earn.

War he considers a frightful waste,  
A thing that should cease for good;  
He never would sell you a chunk of paste  
For a genuine gem, if he could;  
He is chaste and honest or thinks he is,  
He has never had many wives;  
But profits he gladly accepts as his  
Are squeezed out of children's lives.

He is keen to save his immortal soul  
And tickle a golden harp;  
Heaven, in fact, is his lofty goal,  
He frowns on the common sharp;  
He wouldn't go out with a club at night  
To add to his worldly store  
But children are working with all their might  
Because he wants more and more.

—San Francisco Examiner.

MORE PARDONS. Oklahoma City, July 26 (Associated Press)—William F. Hastings and C. M. Downing, Tulsa election officials, convicted to the state penitentiary on charges of "destroying and intermingling ballots" in a Tulsa city election, were given full pardon today by Governor J. C. Walton. Comment is unnecessary. What is the use of communities trying, convicting, wasting taxpayers' funds, hardly earned as they are, only to see the work go by the board. Well, after all, there may be some salvation finally when some law patterned after the suggestions of Campbell Russell is placed upon our statutes. An early outbreak of the Ku Klux Klan may be confidentially awaited in the neighborhood of Tulsa, a city which has already suffered enough from such misplaced "justice."—The Editor.

INCREASING CHURCH ATTENDANCE, in our opinion, is not to be had by following the plan noted below, put in operation by a Blackwell minister. Grandly walking before the foot-lights at a vaudeville show, he announced that the patrons would be given two minutes in which to vacate the house. At the expiration of the time the righteous gentleman switched off the lights, thus effectually ending the performance. He did not, however, check up the incalculable harm done his cause by his foolish act. The scores of people turned away from the vaudeville performance, went away with rage and bitterness in their hearts that American liberties could be so trampled upon in this day of supposed enlightenment. They went home to their various diversions of other natures, certainly often more harmful than witnessing harmless vaudeville, even if it did happen to be a little "risque." When will our interfering, harm-producing agents of the cloth learn how to handle such affairs? It looks like it might be "for years or forever." Certainly they are doing no good in interfering with the harmless pleasures of other people. It may be shocking to them, but we fail to see why, for we have known, intimately, many of them, and in the final analysis, they are no better than the "common herd." Our advice is that they stay at home or at their churches, rival, if they can in attractiveness, the other fellow's show, take the "ball" away from him, but above all things attend to their own business, not the other fellow's.—The Editor.

MR. NORMAN HAPGOOD, a writer of no mean proportion and pen, has been to Russia and gives us his views of the goodness of the Bolsheviks, after he had been shown around their many good things, made and prepared, no doubt for just such trusting soul as Mr. Hapgood seems to be. After three months of toasting, visiting, entertainment, seeing all the good, but apparently none of the bad, Mr. Hapgood says, "Soviet Russia will survive." "I was most delightfully entertained and quartered at the Soviet Guesthouse, formerly the sugar palace, would like to go again." Yes, the Soviet are a shrewd lot. They did not lead the visitor to the dark, dank dungeons, now no doubt housing hundreds of innocent victims awaiting trial upon trumped up charges. They did not show him the roll of departed nobility, the roll of Russia's great host of good people, whose only offense was that they occasionally wore a white collar and took a bath and attempted to maintain, even in the face of disheartening opposition, some semblance of propriety and courteous behaviour toward their fellowman. It is disheartening, indeed, to see a writer of the magnitude, of the great influence of Hapgood, for that must be admitted, "fall" for the cheap, tawdry display of a prearranged show, merely arranged to befool the guileless visitor. We wish Hapgood had stayed at home and that he would not, as he promises, "write-up" his impressions, for they are false, without a doubt, false as Hell itself. They will give one only a pleasant vista, where instead there should be the picture of a brutal firing squad, whipped on by more brutal officers to the murder of refined women and good men.

Likewise, our latest Radical Senator, Honorable Smith Brookheart of Iowa, has paid Soviet Russia a "pleasant" visit. He, too, returns singing paens to the unknown dirty squads of Russia. He, too, has joined the questionable ranks of those who would, like LaFollette, recognize Russia, extend to her the hand of good-fellowship, instead of scorning her as the murderer enmasse that she is.

Speaking of Senator Brookheart's "fall," M. Alexander Schwartz, than whom, perhaps none is better qualified to speak upon the vagaries of Soviet Russia, says: "Mr. Brookheart is the victim of the interpreters of Russia, who are hired to look after the distinguished visitors in the country. When a man of the United States Senatorship calibre arrives at the Russian border he is spotted. He is not allowed to see or hear anything except that which Lenine and Trotzky would have him see and hear. Your Iowa Senator was their victim. The wonderful way in which he was 'taken in' is a pity."

Now we have the pitiable spectacle of two men, widely divergent in their efforts, but both influential in widely different places and degree, but both "falling" for the stuff the Bolsheviks tell them is the real situation. It would seem that a man of common sense, really wishing to get at the bottom of Russia's trouble would have had the forethought to have visited the centers of trouble and woe. Our charitable people are dispensing millions of dollars worth of food stuffs to the starving Russians; those neither Mr. Hapgood or Senator Brookheart thought about visiting, on the other hand, they sat around the Soviet Guest-house, were whisked from pleasure to pleasure while Russia starved and died, then they come home and tell us "it is all mistake, Russia is all right, she (the Soviet) will survive. They will not. The day is fast approaching when the Russian, like all other peoples, will revolt against such unnatural situations and then someone will

pay the limit, which will not begin to even the score for the thousands of crimes against society committed in the name of "righting wrongs."—The Editor.

MUSKOGEE'S HONOR HEIGHTS PARK is decidedly unsafe at night, especially for doctors. Recently a physician on the back seat of the car was the recipient of a bullet in his finger, this, too, unmindful of the fact that the doctor, a Texas visitor, held a little child in his lap. The "bullet-er" explained that the driver was driving in the wrong direction up hill, when he should have been driving down, that the car was not stopped on his "order," hence the "bulleting." The officer is now hunting another job, this for the information of the timid medico who may desire to pay Muskogee's park a visit.

MR. SAMUEL GOMPERS has some observations in *Public Affairs* for July, which deserve the careful attention his ability has earned from the American people. Speaking of the approaching National Independence Day, July 4, Mr. Gompers says: "We need freedom today in a larger sense . . . for the exercise of the normal, rational and necessary functions of our industrial society . . . we are beset by forces that seek either the destruction of freedom or retarding of its development . . . on the one hand, fanatics and zealots who would impose the restraints of bigotry upon all people . . . on the other, industrial and political forces that are totally blind to the course of natural evolution and who seek to shape our growing, changing industrial order to their own desires . . . We need, above all, to be freed today from the machinations and blunders of legislators who have done and are doing their best to impose coercive, restrictive laws upon an industrial organization and an industrial life that must in the nature of things make progress by the evolution within itself of principles, methods and policies. Labor and management alike chafe under the misdirected crusading of politicians. The dour faced moralist who seeks to impose his narrow code upon all humanity is no more a menace to fullness and freedom of life than the legislative experiment or who seeks to write his uncomprehending 'thou shalt not' across the whole industrial horizon. I bespeak no license for pillage and plunder; far from that. But I do bespeak freedom for the normal, rational, constructive functioning of the legitimate forces of industry—freedom for these from the restrictions so ardently sought by special interests and bigots." Mr. Gompers is right. Often we disagree with him, but it must be remembered that he handles questions and situations on a very large scale. So, some of the things which he advocates, cannot help from being encumbered by the smaller things which we do not dislike but have earned our disapproval. One thing is certain. He is correct in stating that certain "interests" are seeking to curb the advancement toward the light of industrial day of the struggling laborer. That very situation is clearly evidenced by the plea of Judge Edward H. Gary of the steel trust that the bars be let down so that Southeastern Europe may unloose its thousands of incompetent, ignorant upon our shores. The doctor, aside entirely from all humanitarian considerations, should never forget that it should be our policy to see that the working man receives the highest possible return for his labors, for in that way lies our own betterment, financial, social and general betterment.—The Editor.

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Meeting Place, Ardmore, May 1924.

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\*Names of officers for 1923 will be added to above as they are reported for the year.

## STATE OF OKLAHOMA BOARD OF MEDICAL EXAMINERS

AUG. 18, 1923

### ATTENTION: Physicians of Oklahoma

The present medical law is very emphatic in requiring every physician to have his license on record in the County where his office is located. We now have a report from every County Clerk in the State and it is surprising the number of Doctors found who have no County record of their license.

There is a heavy fine and no little embarrassment attached to this open violation of the law. We think it carelessness in a majority of cases, hence this general notice of warning.

Another thing for consideration. The law requires that all firms practicing under a firm name—as Clinic—as National Specialists—and under various other titles—to file a complete roster of the membership of all such firms or associations with the County Clerk in each County where practice is done. This is the only means provided whereby we can determine if such firms are composed of licensed practitioners.

The Board of Medical Examiners solicit and expect the active cooperation of all the Medical Societies of Regular, Eclectic and Homeopathic Schools, of the various Counties of the State in enforcing this Medical law. It is a good law if enforced as written, and the present Board is determined, in so far as possible, to enforce every detail.

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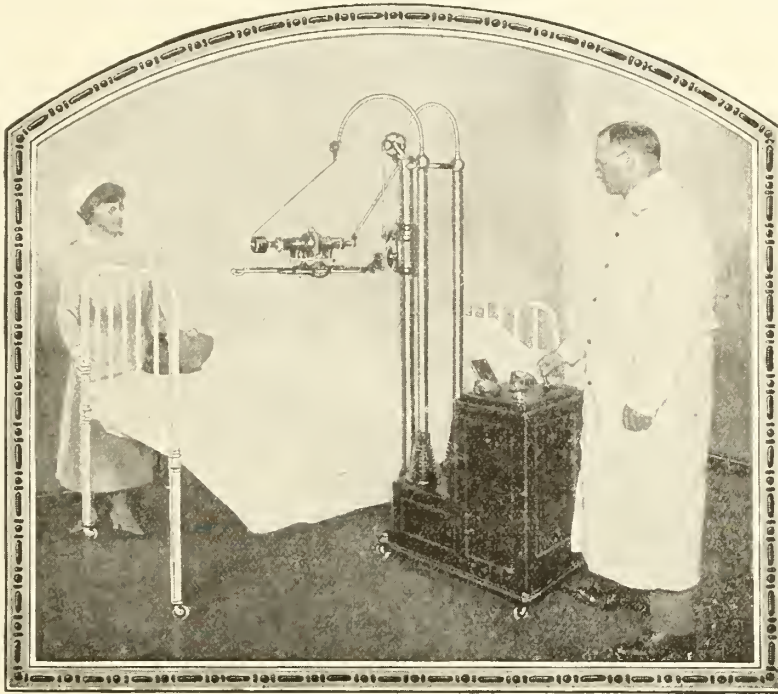
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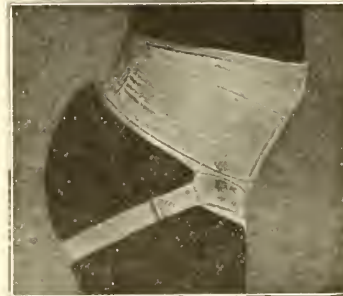
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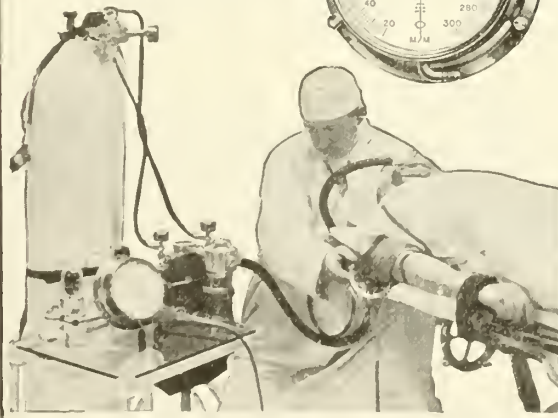
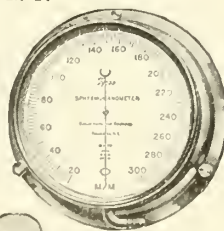
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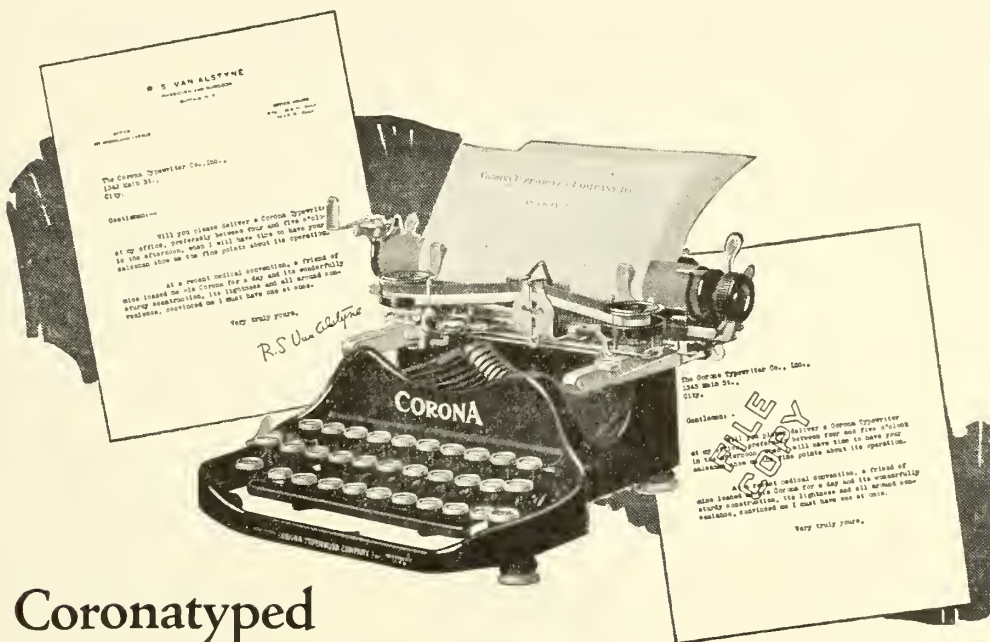
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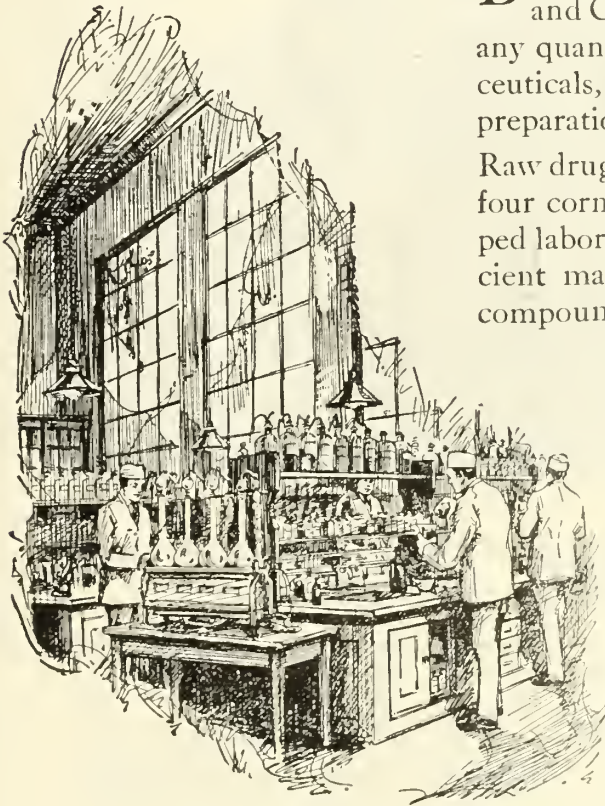
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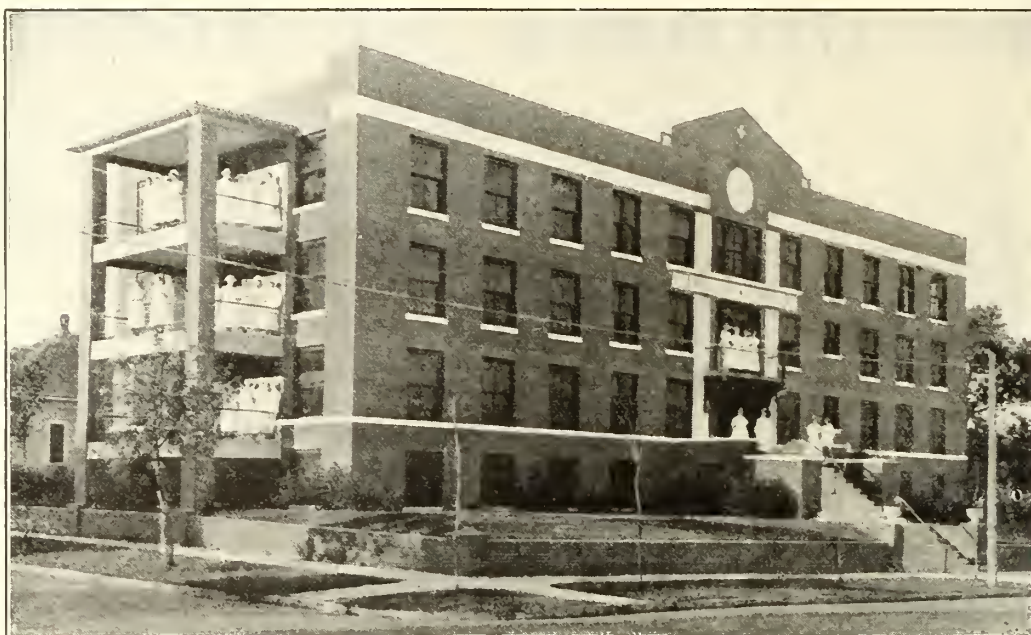
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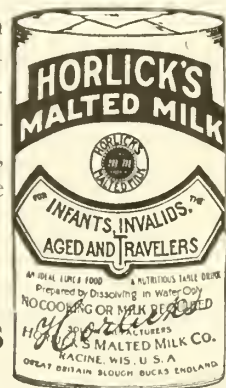
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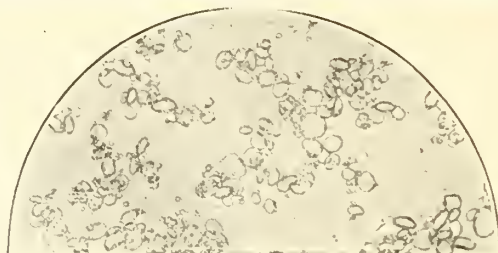
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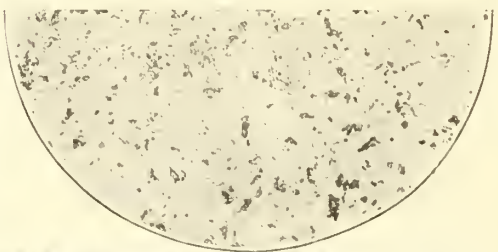
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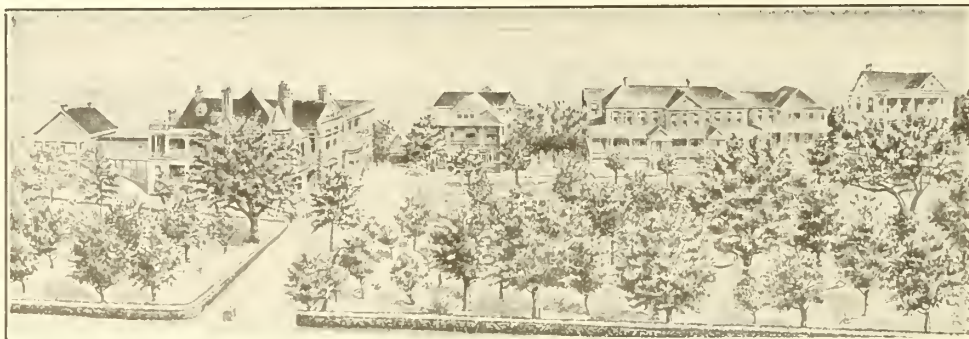
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# THE JOURNAL

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## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVI

MUSKOGEE, OKLA., OCTOBER, 1923

NUMBER 10

### ACUTE INTESTINAL OBSTRUCTION IN INFANCY AND CHILDHOOD\*

E. E. RICE, M.D.  
Shawnee, Oklahoma

During the last fifteen years I have had an average of four cases of intestinal obstruction per year, those in infancy and childhood giving a mortality of 80 per cent and in adults the results were reversed—20 per cent mortality. I feel like running away whenever these cases in infants come to me, as they are fraught with such real danger to the patient and attended with such grave responsibility to the physician as to make it the most serious surgical affection of the abdomen in early life.

My experience being comparatively limited, I shall quote freely from Stone, Peterson and Silleck, and to them must be given the credit for this paper but you want the most modern ideas on this subject and this is my way of reviewing it with you.

During the last decade, experimental research has thrown much light on the physiological, chemical and pathological problems of acute intestinal obstruction. Leaving out of consideration any purely theoretical or conflicting views, Stone sets forth the following points as being generally accepted:

1. There is found in the lumen of obstructed bowels a toxin which, when injected intravenously into normal animals, causes the symptoms of intestinal obstruction.

2. Certain chemicals are developed, as the result of protein disintegration, and cause the symptoms present in acute intestinal obstruction, viz., fall in blood pressure, temperature disturbances, vomiting, diarrhoea, derangement of kidney function, high non-protein blood nitrogen, delay in coagulation time of blood, profound congestion of duodenal and jejunal mucosa, collapse and death. Death is due to a form of chemical intoxication.

This paper is based on a study of 55 cases of intestinal obstruction occurring in 53

young subjects, from the surgical service of the New York Post Graduate Hospital. One infant, in a period of four months, was operated upon twice for acute intussusception and once for postoperative adhesion obstruction. Cases of imperforate anus, congenital intestinal atresia or stenosis, and strangulated external hernia have not been included in this series. A few general facts will be noted: The obstruction developed in infants in forty-three instances (78 per cent) and in children (ranging from twenty months to eleven years) twelve times. Males were affected twice as often as females, There being thirty-six of the former and nineteen of the latter. With regard to the cause of the obstruction, the cases may be divided into the following groups:

1. Early postoperative band or adhesion obstruction (within three weeks of operation), two cases. Both cases developed in children shortly after operations for appendicitis.

2. Late postoperative band or adhesion obstruction (developing after four weeks), one case occurring in an infant, who had recovered from an operation for double intussusception five weeks before.

3. Band or adhesion obstruction (without previous operation), two cases. The first case was in an infant and the obstruction was caused by a congenital band, from the caecum to the jejunum, producing angulation and acute obstruction. The second case was in a girl, eight years old, with appendicitis as the cause of the obstruction.

4. Tumor obstruction, one case, in a five weeks old female infant, with a benign tumor (probably an adenocystoma) at the ileocaecal valve.

5. Mesenteric thrombosis, one case, in an infant, with eighteen inches of gangrenous obstructed jejunum.

6. Pressure obstruction, one case, in a child with an intra-abdominal abscess, left side.

7. Foreign body obturation obstruction, one case in a girl of eleven years who had eaten heartily of plums and had swallowed the stones.

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Annual Meeting, Tulsa, May 15, 16, 17, 1923.

### 8. Intussusception, forty-six cases.

It will be seen that aside from intussusception, acquired types of intestinal obstruction are relatively rare. In this series intussusception was the variety of obstruction encountered in 83, 63 per cent of these cases. While it may occur at any age, it is essentially and pre-eminently an affection of infancy and early life. (A detailed description of the disease will not be given as this has been done in previous papers on the subject.) Certain previously uttered statements will be repeated here, in order to emphasize the following points:

1. The cardinal symptoms—pain, shock, vomiting, mucohaemorrhagic stools and the presence of an abdominal tumor—occur so regularly and in such a clear cut and characteristic way as to make intussusception the easiest of abdominal diseases to diagnose. It is evident that the rapidity and severity of these symptoms and the course of the disease are in definite relationship to the degree of circulatory obstruction and to the poisoning which results therefrom. The morbid anatomical sequence in the acute variety is as follows: Invagination, circulatory stases with exudation and oedema, infection, inflammation and gangrene of the intussusception.

2. Differential diagnosis seldom presents any difficulties. Ileocolitis (acute dysentery), uncomplicated abdominal purpura, and spastic colitis are diseases which must be borne in mind and ruled out. If there is any doubt in a given case it can, as a rule, be settled by a fluoroscopic or X-ray examination.

3. Experience has shown that ten per cent is a liberal estimate to be placed on the cases that can be invaginated by gas insufflation or hydrostatic pressure. The uncertainty, the danger, and the relative futility of acro-hydrostatic measures, are not sufficiently understood or appreciated. Early operation is the safest, the simplest, and the only certain plan of treatment, and gives almost uniformly good results in all types of cases, regardless of the age of the patient.

Of the forty-six cases of intussusception here considered, thirty-nine were under the care of Dr. Peterson and seven were under the care of Dr. W. M. Silleck.

**Age.** Thirty-nine cases were in infants ranging in age from six days to thirteen months, and the seven older patients were from twenty months to eight years of age.

**Sex.** There were thirty-one males and fourteen females.

**Clinical picture.** The physical condition of twenty-six of the infants was exceptionally good; two were in but fair shape; and only one of the series was decidedly subnormal. The majority were breast-fed, well nourished, and previously healthy babies. Only two of the infants were on artificial feeding exclusively. The condition of the seven older patients was fully up to the average.

The onset of the attack was more or less typical in all of the cases. Pain was uniformly present. Some degree of shock was noted in most instances. A few cases showed actual collapse during the initial seizure of pain, but there was always more or less reaction later. Vomiting or regurgitation of stomach contents occurred in every case. Vomiting is rarely a prominent symptom until late in the disease. When it appears early and is persistent, we have come to look upon it as highly significant of circulatory strangulation, with the prospect of a rapidly developing gangrene of the intussusceptum. Mucohaemorrhagic stools were present in forty-four cases (about 95 per cent), absent in but two. A distinct tumor or tumefaction was felt in every case, with but two exceptions.

**Varieties.** Following the simple classification suggested by Clubbe, these cases can be divided into the following groups: Enteric, three cases; ileocaecal, thirty-one cases; enterocolic or double intussusception (entero-ileocaecal and ileocolic-colic), eight cases; colic, two cases. In two instances where no operation was performed, the type of invagination was not determined.

**Etiology.** In two cases, in boys aged four and one-half and seven years, respectively, a Meckel's diverticulum was the causative factor in the production of the intussusception. In another case, in a six and one-half months old male infant, a congenital tumor of the caecum (cystadenoma) was the cause. In another infant, the last two inches of ileum, not involved in an ileocaecal intussusception, appeared macroscopically to be the seat of a papillary angiomatous growth. The pathologist, however, pronounced the growth to be merely inflammatory. Appendicitis is believed to have been the causative factor in several instances. It has always been our rule to make the removal of the appendix a step of the operation, believing that occasionally appendicular irritation induced the spasm and brought about the invagination. Since the histological study of these appendices has been taken up as a routine measure, it has been found that a certain num-

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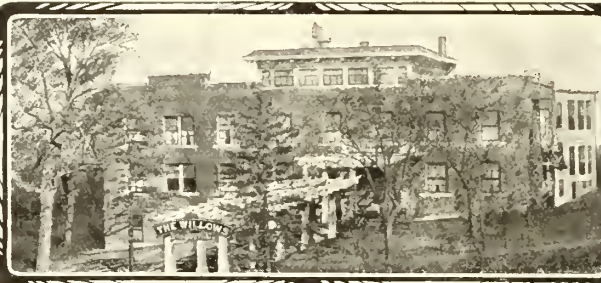
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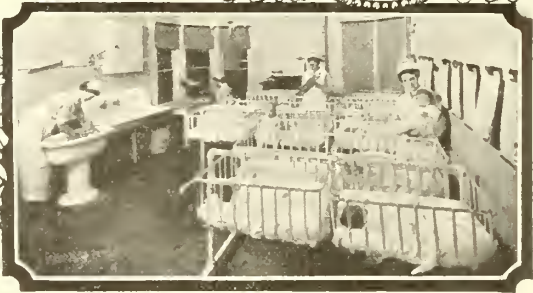


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### ACUTE INTESTINAL OBSTRUCTION IN INFANCY AND CHILDHOOD\*

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During the last fifteen years I have had an average of four cases of intestinal obstruction per year, those in infancy and childhood giving a mortality of 80 per cent and in adults the results were reversed—20 per cent mortality. I feel like running away whenever these cases in infants come to me, as they are fraught with such real danger to the patient and attended with such grave responsibility to the physician as to make it the most serious surgical affection of the abdomen in early life.

My experience being comparatively limited, I shall quote freely from Stone, Peterson and Silleck, and to them must be given the credit for this paper but you want the most modern ideas on this subject and this is my way of reviewing it with you.

During the last decade, experimental research has thrown much light on the physiological, chemical and pathological problems of acute intestinal obstruction. Leaving out of consideration any purely theoretical or conflicting views, Stone sets forth the following points as being generally accepted:

1. There is found in the lumen of obstructed bowels a toxin which, when injected intravenously into normal animals, causes the symptoms of intestinal obstruction.

2. Certain chemicals are developed, as the result of protein disintegration, and cause the symptoms present in acute intestinal obstruction, viz., fall in blood pressure, temperature disturbances, vomiting, diarrhoea, derangement of kidney function, high non-protein blood nitrogen, delay in coagulation time of blood, profound congestion of duodenal and jejunal mucosa, collapse and death. Death is due to a form of chemical intoxication.

This paper is based on a study of 55 cases of intestinal obstruction occurring in 53

young subjects, from the surgical service of the New York Post Graduate Hospital. One infant, in a period of four months, was operated upon twice for acute intussusception and once for postoperative adhesion obstruction. Cases of imperforate anus, congenital intestinal atresia or stenosis, and strangulated external hernia have not been included in this series. A few general facts will be noted: The obstruction developed in infants in forty-three instances (78 per cent) and in children (ranging from twenty months to eleven years) twelve times. Males were affected twice as often as females. There being thirty-six of the former and nineteen of the latter. With regard to the cause of the obstruction, the cases may be divided into the following groups:

1. Early postoperative band or adhesion obstruction (within three weeks of operation), two cases. Both cases developed in children shortly after operations for appendicitis.

2. Late postoperative band or adhesion obstruction (developing after four weeks), one case occurring in an infant, who had recovered from an operation for double intussusception five weeks before.

3. Band or adhesion obstruction (without previous operation), two cases. The first case was in an infant and the obstruction was caused by a congenital band, from the caecum to the jejunum, producing angulation and acute obstruction. The second case was in a girl, eight years old, with appendicitis as the cause of the obstruction.

4. Tumor obstruction, one case, in a five weeks old female infant, with a benign tumor (probably an adenocystoma) at the ileocaecal valve.

5. Mesenteric thrombosis, one case, in an infant, with eighteen inches of gangrenous obstructed jejunum.

6. Pressure obstruction, one case, in a child with an intra-abdominal abscess, left side.

7. Foreign body obturation obstruction, one case in a girl of eleven years who had eaten heartily of plums and had swallowed the stones.

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association, Annual Meeting, Tulsa, May 15, 16, 17, 1923.

#### 8. Intussusception, forty-six cases.

It will be seen that aside from intussusception, acquired types of intestinal obstruction are relatively rare. In this series intussusception was the variety of obstruction encountered in 83, 63 per cent of these cases. While it may occur at any age, it is essentially and pre-eminently an affection of infancy and early life. (A detailed description of the disease will not be given as this has been done in previous papers on the subject.) Certain previously uttered statements will be repeated here, in order to emphasize the following points:

1. The cardinal symptoms—pain, shock, vomiting, mucohaemorrhagic stools and the presence of an abdominal tumor—occur so regularly and in such a clear cut and characteristic way as to make intussusception the easiest of abdominal diseases to diagnose. It is evident that the rapidity and severity of these symptoms and the course of the disease are in definite relationship to the degree of circulatory obstruction and to the poisoning which results therefrom. The morbid anatomical sequence in the acute variety is as follows: Invagination, circulatory stases with exudation and oedema, infection, inflammation and gangrene of the intussusception.

2. Differential diagnosis seldom presents any difficulties. Ileocolitis (acute dysentery), uncomplicated abdominal purpura, and spastic colitis are diseases which must be borne in mind and ruled out. If there is any doubt in a given case it can, as a rule, be settled by a fluoroscopic or X-ray examination.

3. Experience has shown that ten per cent is a liberal estimate to be placed on the cases that can be invaginated by gas insufflation or hydrostatic pressure. The uncertainty, the danger, and the relative futility of aero-hydrostatic measures are not sufficiently understood or appreciated. Early operation is the safest, the simplest, and the only certain plan of treatment, and gives almost uniformly good results in all types of cases, regardless of the age of the patient.

Of the forty-six cases of intussusception here considered, thirty-nine were under the care of Dr. Peterson and seven were under the care of Dr. W. M. Silleck.

**Age.** Thirty-nine cases were in infants ranging in age from six days to thirteen months, and the seven older patients were from twenty months to eight years of age.

**Sex.** There were thirty-one males and fourteen females.

**Clinical picture.** The physical condition of twenty-six of the infants was exceptionally good; two were in but fair shape; and only one of the series was decidedly subnormal. The majority were breast-fed, well nourished, and previously healthy babies. Only two of the infants were on artificial feeding exclusively. The condition of the seven older patients was fully up to the average.

The onset of the attack was more or less typical in all of the cases. Pain was uniformly present. Some degree of shock was noted in most instances. A few cases showed actual collapse during the initial seizure of pain, but there was always more or less reaction later. Vomiting or regurgitation of stomach contents occurred in every case. Vomiting is rarely a prominent symptom until late in the disease. When it appears early and is persistent, we have come to look upon it as highly significant of circulatory strangulation, with the prospect of a rapidly developing gangrene of the intussusceptum. Mucohaemorrhagic stools were present in forty-four cases (about 95 per cent), absent in but two. A distinct tumor or tumefaction was felt in every case, with but two exceptions.

**Varieties.** Following the simple classification suggested by Clubbe, these cases can be divided into the following groups: Enteric, three cases; ileocaecal, thirty-one cases; enterocolic or double intussusception (entero-ileocaecal and ileocolic-colic), eight cases; colic, two cases. In two instances where no operation was performed, the type of invagination was not determined.

**Etiology.** In two cases, in boys aged four and one-half and seven years, respectively, a Meckel's diverticulum was the causative factor in the production of the intussusception. In another case, in a six and one-half months old male infant, a congenital tumor of the caecum (cystadenoma) was the cause. In another infant, the last two inches of ileum, not involved in an ileocaecal intussusception, appeared macroscopically to be the seat of a papillary angiomatous growth. The pathologist, however, pronounced the growth to be merely inflammatory. Appendicitis is believed to have been the causative factor in several instances. It has always been our rule to make the removal of the appendix a step of the operation, believing that occasionally appendicular irritation induced the spasm and brought about the invagination. Since the histological study of these appendices has been taken up as a routine measure, it has been found that a certain num-

ber of them show definite, acute inflammation, even where no trauma to this organ was present. It is hoped that others will make investigations along this line, for we are convinced that appendicitis is one of the causes of intussusception. Enlarged mesenteric glands were found in a considerable proportion of these cases, but were thought to be the results rather than the cause of the trouble. In the majority of these cases they were unable to find an unmistakable causative factor to account for the intussusceptions.

**Recurrence.** There were but two cases in this series in which recurrence took place. In the first case, there was a return of symptoms in an infant, upon whom Dr. Silleck had operated two days before for ileocaecal intussusception, and, on re-opening the abdomen, he reports the finding of a recurrence at the same site, with gangrene of the neck of the intussusceptum, necessitating a resection. The second case was operated on by Dr. Peterman for an entero-ileocaecal intussusception. Reduction was difficult and convalescence stormy. Five weeks later I operated a second time for acute obstruction of the lower ileum caused by adhesions. Two months later symptoms of intussusception developed, and, at the operation, performed this time by Dr. Silleck, an ileocaecal invagination was successfully reduced.

**Results.** One infant who had been ill for seven days with intussusception was moribund when brought to the hospital and died within an hour of admission. Another late case, ill for three days died on the operating table just as the operation was started. A gangrenous, irreducible, double intussusception was removed post mortem. There was but one successful reduction, without resort to laparotomy. The patient, a girl of five years of age, was seen in consultation with Dr. A. H. Cilley and presented the usual history and symptoms of intussusception. Following hydrostatic pressure and postural treatment, relief was obtained. Of the remaining forty-three cases, twenty-eight were reducible and fifteen were either gangrenous or irreducible or both. In the first group there were three deaths, due to an overwhelming toxæmia, nine hours, seven hours, and five hours after reduction, in infants who had been ill four days and three days, respectively. Another fatality occurred in a boy who developed a colic intussusception while ill with influenza, during the 1918 epidemic. Reduction was accomplished with ease, about six hours after the onset, but death followed four days

later, and was due to a double influenza pneumonia. Another case developed pneumonia after leaving the hospital and died of this disease on the fourteenth day following operation. Another late death occurred in a four months old infant, twenty-one days following operation, after dismissal from the hospital. In this instance, the cause of death was not determined. To sum up the results in the reduction cases: There were twenty-two cures and six deaths, mortality 21.42 plus per cent. If allowed to exclude the deaths not directly due to the intestinal obstruction or to the surgical treatment thereof, the mortality would drop to 10.71 plus per cent. There were several recoveries in late and profoundly toxic cases. The longest interval between the onset of the disease and a successful reduction was four days; the shortest was five hours. Every case in this group seen within forty-eight hours of the onset recovered, with the single exception of the boy who died of influenza pneumonia.

In the second group of fifteen cases requiring resection, there were four recoveries and eleven deaths; mortality 72.4 per cent. Of the thousands of cases of intussusception which have been reported throughout the world, there are on record less than a score of successful resections in infants. In older children the statistics are not quite so appalling. Dr. Peterman had the honor, in 1905, of presenting before the Surgical Section of the Academy of Medicine the first successful resection of a gangrenous intussusception in an infant on record. Since that time he has had two other successful resections, one in an infant eight months old and the third in a boy four and one-half years old. The fourth successful operation in this series was performed by Dr. Silleck. Of the eleven fatal cases, nine were in infants.

When this series of intussusception cases is studied as a whole, one is impressed with the large proportion of late cases. More than two-thirds were received into the hospital after the first twenty-four hours, and about one-third of the total number required resection. In spite of the fact that diagnosis is easy, no class of cases is more often unrecognized and mismanaged.

There were twenty-two deaths in this series of fifty-five cases of acute intestinal obstruction in children, giving a mortality of forty per cent. This includes the fatalities from all causes, early and late, regardless of whether the patient received treatment or not. The most important factor in this intestinal obstruction problem is to

operate early, before involved tissues have undergone serious damage, and before toxæmia has become pronounced. It is the only way to lessen the great morbidity and to reduce the high mortality, which inevitably accompany delay. Finney says it is better to have the operation done early than well. Better a poor operation on a patient in poor condition. Van Beuren makes the axiomatic statement that the longer a patient lives with acute intestinal obstruction before operation, the sooner will he die after operation. So much for this phase of the question! Experience has taught us that occasionally and apparently hopeless risk can be converted into a fair sort of a gamble by treatment which combats shock, tissue desiccation, and toxæmia. External heat, appropriate stimulation, stomach lavage, the introduction of fluids into the system by infusion or hypodermoclysis or proctoclysis, are just as much indicated, in selected instances, before operation as after. Following the operative relief of the obstruction, in addition to the measures just mentioned, morphine, atropin and pituitrin, if used judiciously, are agents of proven worth. If threatened gangrene or perforation of the bowels does not force the operator to take radical steps—then a two-stage operation will often prove successful where a single procedure might have resulted in failure. The importance of emptying the loaded segment of bowel above the obstruction is obvious. Caecostomy in acute obstruction of the large intestine, and enterostomy (particularly jejunostomy) in obstruction of the small bowel—to precede or to accompany the operation for the relief of the obstruction—are often life-saving measures. A local anaesthetic should be the anaesthetic of choice, in many of these operations.

#### A PLEA FOR A BETTER UNDERSTANDING AND THE COURAGE TO DO IN THE TREATMENT OF LARYNGEAL DIPHTHERIA\*

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Shawnee, Oklahoma

Diphtheria is a disease of antiquity. We find it so graphically described in the early writings of man, that we can little doubt their knowledge of such a malady. Asclepiades who lived about one hundred years before Christ, scarified the tonsils and per-

formed laryngotomy for obstructed breathing. Aretæus, a Greek physician, at the commencement of the Christian era, gives in writing still extant, a clear and accurate description of mild and severe diphtheria. After describing what he designates "ulcers upon the tonsils, covered with a white, livid or black concrete product," he adds "if the malady invades the chest by way of the trachea, it causes suffocation in the same day."

Galen, Ameliannus, Trousseau, Borthes, Bouchut, Klebbs, Loeffler, von Behring, Roux, Yersin and O'Dwyer, all down through the ages have contributed much, and each mark mile-stones of progress in the treatment of the most dreaded and most pitilessly fatal of all the diseases of childhood.

When Klebbs and Loeffler established the etiological factor and von Behring brought forth the specific serum, universal success seemed almost assured. The end of the rainbow, long sought, lay just around the corner; and yet, statistics collected from larger centers show that the mortality has remained quite constant for the past twenty years. The public and the doctor must share the blame. The insidious onset, the unalarming symptoms and the dread of quarantine contribute much to the failure in calling for medical aid. The procrastination, the failure to carefully examine the throat and most of all the failure to "play trumps" when in doubt, are too often the shortcomings of the physician.

In the further discussion of this subject, I wish to confine my remarks to the management of diphtheria of the larynx. But since this form is usually secondary to pharyngeal diphtheria, I have prefaced my remarks with generalities. Diphtheria is diphtheria, regardless of location and it seems unnecessary for me to emphasize the importance of the early use of large dosage of anti-toxin, a remedy so well known and so well established that its specificity goes unquestioned; and is probably the greatest of all therapeutic agents—save for quinine in malaria. But in laryngeal diphtheria we must truly conserve the "breath of life" and often times more heroic measures must be instituted.

It is difficult to obtain statistics on deaths due to laryngeal diphtheria. In Baltimore, where death certificates are not accepted, unless the type is specified, Hogan<sup>1</sup> reports for the years 1919 and 1920 two hundred and forty-six deaths from diphtheria. Of this number, two hundred and two, or eighty-two and eleven one-hundredths

\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

(82.11) per cent were due to the laryngeal type. If this high mortality obtains in other cities and communities, then our problem is to educate either the public or the physicians, or both, to recognize laryngeal diphtheria earlier, give larger doses of anti-toxin (intravenously, if possible) and to intubate in time. Not waiting until cyanosis appear and the patient moribund. He who procrastinates frequently returns to find crepe on the door. The recession of intercostal space, extreme restlessness, approaching cyanosis should be signals to intubate.

In 1858 Bauchut, of Paris, published a report of six intubations for "membranous croup." A funnel like tube was introduced by means of metal male catheter. Performed with such crude instruments it met, as might be expected, with strong opposition by such men as Borthiez and Trousseau, who were ardent supporters of tracheotomy. It soon fell into disuse and was forgotten. It remained for our American Surgeon, Doctor Joseph O'Dwyer, in 1888, wholly ignorant of previous history of intubation, after many measurements of the larynx on the cadaver, many discouragements and many modifications, to evolve an instrument that to this day has been little improved upon—a device that has saved thousands of these little sufferers from the most horrible of all deaths—memory pictures we would like to forget.

In these days of specializing is intubation becoming a lost art? The general man leaves intubation for the surgeon. He, in turn, passes the buck to the laryngologist and when the emergency arises none are prepared and the child dies, while the doctor plays the role of "dear Gaston and dear Alphonse." Those who become the greatest experts are the men in general practice in the field and not the specialist. The laryngologist who is accustomed to working by vision and not by the sense of touch is little better qualified to intubate than the novice.

Direct intubation as advocated by Purcell<sup>2</sup> and Goodloe<sup>3</sup> in contra-distinction to the indirect or so called "blind method" may be a success in their hands, but again, must we look to the highly skilled laryngologist in the distant city, while the unfortunate little one dies of suffocation? Nor should we give much credence to the physician who claims the larynx won't retain the tube or else that it does not relieve. It usually won't when placed in the esophagus. While hospitalization is greatly to be desired, we should not hesitate to intubate in the home. Cartin<sup>1</sup> reports three hundred

and fifty intubations, practically all performed in the homes of miners or steel workers, with the exceedingly low mortality of ten per cent. And of this number he reports no chronic tube cases, an objection often raised against intubation.

Of my own cases, twenty-six in all, I have had one death. This case was relieved by tube for only a few hours, when it became necessary to do a tracheotomy. In my enthusiasm over the apparent results, I left the home without instructing the attendants how to remove the inner tube and what to do in an emergency. I was hurriedly called but arrived too late. This sad experience taught me the lesson, the battle is only half won when the tracheotomy tube is placed.

I do not want to appear too elementary in describing the technic of intubation, but it is the little details that count. Play with the tubes and applicators, study their mechanism. The knowledge gained will give you a confidence and dexterity that will serve you well in an emergency. I prefer the patient in the upright position, placed in the lap of an attendant, with a sheet wrapped snugly around enclosing arms to its side and with the head resting against the left shoulder of the attendant. The body and head of the child in an erect posture, as if suspended by the hair of the head. This is an important detail and often overlooked. The feet fixed between the knees of the attendant. An assistant with both hands holding the head and assisting in holding the mouth gag in left angle of the mouth and far enough back to be out of the way and at the same time hold the mouth wide open. The operator standing in front, facing the patient, passes his left index finger over the tongue well down into the pharynx, bringing finger forward it comes in contact with the epiglottis, this is brought upward and forward against the base of the tongue and there held in place, while the tip of the intubation tube is passed down the radial side of the index finger, thus directing the tip of the tube into the larynx. Carry well down, gently but rapidly, release the tube with the trigger of the applicator, keeping the left index finger in place and holding tube down while obturator is being removed. Be sure it is well seated. Force is not necessary. Remove gag and attach silk thread to the cheek with adhesive tape. After a few minutes of paroxysmal coughing, in which much accumulated secretions are expelled, the child soon falls asleep and except for occasional fits of coughing, experiences very little discomfort from the presence of the tube.

After the child has rested for half an hour and breathing has become easy, the mouth gag should be replaced and left index finger introduced, assuring oneself that the tube is well seated, then cut and remove the loop of silk thread from the eyelet of the tube, thus preventing an accidental dislodgement of the tube.

The tube should be left in place from five to seven days and then removed. Repeating the same procedure as for intubation. One can feel the head of the tube and its opening. The tip of the extubator is passed down the radial side of the index finger, while by the sense of touch the tip is directed into the lumen of the tube.

After removal of the tube hold yourself in readiness for a reintubation, which is frequently necessary as a result of oedema of the larynx, which follows the release of pressure from the tube. Do not be too hasty to reintubate, for we usually have more or less difficult breathing. On the other hand, do not be caught napping. Usually after six or eight hours has elapsed after extubation, the danger has largely passed. I believe a tube left in place for as long as six days lessens greatly the necessity for reintubation.

Prior to the days of successful intubation, tracheotomy had become a very common operation and had been practiced almost since the dawn of history, doubtless, saving countless lives of these little sufferers. But tracheotomy at its best carries with it a rather high mortality and today intubation is the procedure of choice. Intubation should be one of expediency—tracheotomy one of absolute necessity. In an emergency or after intubation has failed to relieve, tracheotomy should be performed. I can best illustrate my conception of an emergency tracheotomy by reporting a case. Pardon my manifestation of personal pride.

About two years ago I was hurriedly called, about four o'clock in the morning, three miles in the country to see a five year old boy with laryngeal diphtheria. I had seen the case late in the evening before and had given 10,000 units of anti-toxin. Symptoms were not alarming and apparently an early case. So I returned home dismissing the case from my mind. When the emergency call came, it dawned on me that both our intubation sets were in use in neighboring towns. I tried to borrow a set from some of the doctors but telephone service is not very prompt at that time in the morning, and doctors were less prompt and those that did answer did not have a set. So after considerable delay I made the

call, fully expecting (from what they had told me over the telephone) the child would be dead on my arrival.

The child was unconscious and no air was entering the lungs. The pulse was very slow but of fair volume. I placed the child at once on the table, amid dirty dishes and with the aid of two instruments, a pair of scissors and a nasal speculum (all that I had in my grip) I opened the trachea and introduced a self-retaining nasal speculum. The child breathed and is living today. The carbon dioxide anesthesia was perfect. The child did not so much as move a hand while opening the trachea. My assistant, a twelve year old brother of the patient, held a lantern for me; while the rest of the family, amid weeps and wails, deserted the house. For which I was truly thankful. I left the house and returned a few hours later and placed a tracheotomy tube. I finally persuaded the operation shy father to stay on the job, remove and clean the inner tube and to remove both tubes when breathing became difficult. Inner tube should be removed, cleaned and replaced every hour or two for the first forty-eight hours, or the secretions will dry and soon obstruct the tube. It is quite a problem to keep the air moist. This can best be accomplished with steam and an improvised tent. Dried secretions frequently extend down into the trachea, as it did in this case, making it necessary to pass flexible applicators down to bifurcation of the trachea to dislodge them.

Aspiration pneumonia is a frequent complication and the days immediately following tracheotomy are busy ones for the doctor and the attendants.

In reciting this narrative, I do not wish to minimize the importance of careful technique and preparation in doing a tracheotomy. On the other hand, when an emergency arises, meet it. Do your best and you will frequently be rewarded for your efforts.

In closing this discussion I want to stress some of the most important features in the management of laryngeal diphtheria. While laryngeal diphtheria is usually secondary to pharyngeal involvement, do not doubt what you can see. It may be primarily of the larynx. Make direct smears if you wish, but do not depend on them for a diagnosis in any type. Make cultures, they are usually very helpful, but often most unsatisfactory in the laryngeal type. Strive to make a diagnosis but do not fail to "play trumps" when there is the least doubt. Give large doses of anti-toxin early and repeat. Do

not wait until too late to intubate. Do it yourself, unless you are quite sure you have someone available who can do it better than you. Give the child every chance for its life. If caught in a pinch or intubation fails, do a tracheotomy. You have everything to gain and nothing to lose.

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### DIAGNOSIS OF EARLY PULMONARY TUBERCULOSIS\*

ELLIS LAMB, M.D.  
Clinton, Oklahoma

The Mertopolitan Life Insurance Company have been able to reduce the deaths from pulmonary tuberculosis in their white male wage earners in the industrial department 59 per cent in eleven years, and the age at which their maximum death rate occurs has been advanced from 38.8 years to 44.8 years during the same period.

The same company, by systematically searching out the incipient and other cases, during about a six year period, from their beginning of sanatorium treatment for their employees give the following statistics; a total of 1,018 patients discharged. There were 592 incipient cases admitted, and of this number 81 per cent were discharged as "apparently arrested or quiescent." Fifteen per cent discharged "improved," 366 moderately advanced cases, 42 per cent discharged "apparently arrested or quiescent," and 36 discharged "improved." Sixty far advanced cases, there were only two discharged "apparently arrested or quiescent" and eight discharged as "improved." The other 84 per cent were discharged "unimproved," "progressive" or "dead."

After about one year from the compilation of these statistics, 896 of these patients who could be traced to the incipient cases, 90 per cent were at work, seven per cent were alive, but unable to work and three per cent had died.

Of the moderately advanced cases, 70 per

cent were at work, 15 per cent were alive, but unable to work, and 15 per cent were dead.

Of the far advanced cases discharged alive, 34 in number, only seven or 21 per cent were at work, seven were alive but unable to work and 20 of these cases were dead.

My observation of one year at the State Tuberculosis Sanatorium at Clinton, shows that a painful few of incipient cases come for treatment. The reason for this is twofold, the public do not fully appreciate the importance of early, and the dangers of delayed investigation, and the medical profession, as a rule, are too lax, or too busy to properly evaluate early symptoms and signs of what "should be early suspected cases." The mistake of most doctors is more often due to laxness and carelessness than is to inability.

It usually requires a great deal of moral courage to even meet our honest convictions, and tell a patient and family that they have tuberculosis; when the disease has apparently made but little inroads upon the patient's health, and when we feel that possibly it might not be, or at least it might be of the abortive type, following some other acute infectious disease; knowing that this more than likely will change this patient's entire plans for life, and many of them will even hunt for a doctor who will tell them what they want to hear "that they have no T. B. Yet these are conditions we have to deal with, and educate the people to the true value of an early diagnosis, and HOW MUCH MORE amenable to treatment it is in the incipency.

An incipient case requires but a few weeks for treatment compared to many months or years for the MODERATE and ADVANCED cases, and the chances for ultimate arrest correspondingly decrease with advancement of the case.

A careful written history is the first essential in diagnosis, and usually if we are really dealing with a tubercular case, it will usually disclose a direct infection from some member of the family or from an associate, as a rule, during infancy or the early years of childhood.

This history must be detailed, and include family back to grandparents and everyone, particularly who have been closely associated in any way with the patient. There is a great tendency to discredit heredity; THERE IS NO direct heredity of the disease itself but many will inherit a direct tendency, viz., a subnormal resistance to this particular infection, and some families

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show a tendency to certain sex; in some families to the female members, in other families the male members seem to be more deposed; consequently a history of the health of and cause of death of parents, grandparents, uncles, aunts, cousins, brothers and sisters will give the doctor an idea of the material at hand.

From the "Stock" questions on the history sheet or cards it is usually possible to get certain leaders, and follow them to the point of direct infection, and aside from a direct admission of a tubercular infection in some member, we should be on the alert for such terms as chronic bronchitis, anemia, nervousness, decline, chronic indigestion, etc., any of these may, when carefully ferreted out, mean phthisis, "died from the effects of pneumonia," a few weeks or months after the disease, usually means acute "pneumonic phthisis," unless it was directly due to empyema or pulmonary abscess, and "died from the effects of exposure" is very apt to mean tuberculosis if gone into carefully. Chronic coughs, frequent colds, frequent attacks of influenza, may mean exacerbations of tuberculosis.

As to a personal history, the early childhood history is VERY important, and this must be followed up to the present. Among the important things are whooping-cough, measles, influenza, etc., and whether a rapid recovery was made from these acute infections.

Influenza, lasting more than three or four weeks is apt to mean tuberculosis. All pleuritis "wet" or "dry" mean tuberculosis unless known to be pneumonic, traumatic, or post-operative.

The term "fever" as is sometimes loosely applied to a semi-invalid condition of unknown origin may mean malaria, endocarditis, typhoid or influenza, and if all these can be ruled out, it is then apt to mean tuberculosis.

Bone and joint infections, fistulas, lymph-nodes (unless due to subacute tonsillitis, syphilis, etc.) scars, or such may in the neck mean tuberculosis; getting a lead on any of these will naturally give a clue for further investigation.

The occupation should be gone into, and more particularly as to the surroundings, and whether sufficient ventilation, rest, and recreation are had, as well as the health of the fellow workmen and the home life and surroundings, whether wholesome food, and sufficient sleep in properly ventilated rooms or porch is had.

Habits of the patient as to alcohol, tobacco and any and all excesses, and syphilis

must be watched for in all cases.

Active tuberculosis is a disease of symptoms, cough is a constant symptom, usually of a hacking nature and spoken of as a "dry cough," in the early stages, soon beginning to raise a little mucus, chiefly of mornings, gradually becoming a little more colored with yellow and vomiting at the end of coughing, particularly true in children, and where whooping-cough can be ruled out this is a POSITIVE sign of tuberculosis.

Temperature usually showing a wave of a few degrees, in mornings running sub-normal 97 degrees or even in some cases 96.5 degrees, with an afternoon raise to 99 or more. This afternoon rise above the morning temperature should be regarded as fever, for this patient, basing the maximum morning temperature as normal; and in all doubtful cases which should be re-examined at subsequent times, we should have a two weeks' temperature record, taken four times a day at regular stated intervals. Loss of weight without other known causes is very significant. Loss of strength, becoming easily tired, a tired feeling on arising, which soon passes off with the first morning's exercises, coming on again during the afternoon, and the patient will tell you that a night's sleep does not refresh them as it formerly did; pains in the chest and about the body should be investigated.

In most cases there is a peculiar form of nervousness, and I have noticed this particularly in some children, a form of psychosis, often showing themselves alert and interested in your work.

Many and various forms of digestive disturbances. Night sweats which usually come on in the after midnight hours. Headaches.

The "phrenic sign" is elicited by pressure over the course of the phrenic nerve between the heads of the sterno-cleido mastoid muscles, it is a fairly constant, and early sign, and of considerable importance, when it accompanies other important symptoms. Deep pressure at this point gives pain, referred to affected side pressing on both sides, watching the patient's face for expression of pain, and ask them to locate the site of pain.

Physical examination reveals but little in the very early stages, increasing with the approach to the "moderately advanced stage."

Some cases are so acutely rapid as to reach the advanced stages within a very short time, while others remain in the (pathological) incipient stage for months or

even years, still others with small areas of involvement may have "little breaks from time to time and become closed cases during the interim."

Strip the chest completely of every patient. By inspection, note the general appearance of patient whether apparently well nourished, or more or less emaciated, condition of skin. As cases become more advanced the skin becomes more dry and is wrinkled, usually some atrophy of muscles over apex of affected lung, and supra-clavicular space of diseased side becomes narrowed and also usually looks more shrunken; close observation may reveal the affected side "lagging" and does not fully expand with the other side.

Palpation will usually show the "lagging" of respiration and it is sometimes possible to notice an increased vocal fremitus over diseased area..

Percussion should be begun as low as center of chest to get the normal resonance and carefully go upward, noting any dullness which may be caused by a fresh indurated lung tissue from incipency, or might prove to be an old healed lesion, comparing the two sides, and your findings to be checked with the most important thing in physical examination, AUSCULTATION.

No two normal chests sound alike, and to get the normal chest sound for a particular individual, you should first auscultate in the axillary region, and carefully go over one lung at a time, first front and then back, with patient breathing normally, or at least but slightly deeper than normal, noting any abnormal sounds. An interrupted or cog-wheeled breathing usually means one of two things, a new incipient area of infiltration, or old scar tissue from an old healed process and your history and other findings will have to reveal which.

It usually is possible in fairly early stages to hear sub-crepitant rales at the end of inspiration, caused from a little transudation of fluids into some of the air cells, before actual softening and breaking down appears, or at least while the sputum is still negative and shows no evidence of purulency, etc. Checking all spots for future reference.

After thus going over a patient, then go over a second time, having the patient to exhale, cough at the end of exhalation and to take a quick short inspiration, and if there is any moisture, this will bring it out.

"Crackles" in upper lung or apex in a patient not sick with pneumonia means tuberculosis, and in base without definite

signs and symptoms elsewhere usually means something else such as "gassed" lungs. We should not get rales confused with marginal sounds frequently heard about the base of the lung and caused by pleurae stripping loose during respiratory movement.

All physical signs may be very meager and very hard to find, but when they check in the slightest way with a POSITIVE HISTORY AND POSITIVE SYMPTOMS of an activated case, you are justifiable in making a POSITIVE diagnosis, on the other hand where physical examination reveals an old lesion without activation with no symptoms of toxicity and no T. B. discernable in the sputum, I believe we should stop with proper caution to this patient as how to live and properly care for himself and not make a positive diagnosis.

The length of this paper precludes the discussion of any of the laboratory aids in diagnosis, most of them having mighty good values, particularly is this true of the x-ray which helps more to cinch a diagnosis and shows much of the amount of involvement and should be resorted to in every case where at all practicable.

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### AMBLYOPIA

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Amblyopia is a term used to denote a partial or complete blindness, either of one or both eyes, and which is due to an obscure pathological condition and does not cause any appreciable change in the normal fundus.

Amblyopia is either congenital or acquired.

Congenital amblyopia, as the word implies, exists from birth.

The most predominating cause is due to some constitutional disease of either parent.

Some writers attribute the cause to an extreme degree of hypermetropia, astigmatism or squint.

I am rather inclined to believe that amblyopia due to any of these causes, should come under the acquired form, for if these conditions were corrected during infancy, the amblyopia would not exist.

Acquired amblyopia is that form which develops during life time. It may be produced from anatomical conditions, as in astigmatism, or in squint where we have an uneven muscle balance. When making an examination with your ophthalmometer,

and you find one eye with 4 D. of astigmatism, and the other eye, say, with 1-2 D., you can reasonably expect the former to be amblyopic, especially will you find this true if the patient has never worn glasses.

The same rule will apply to exaggerated cases of squint.

Amblyopia may be due to external causes, as from injury, or too glaring light, as in acetylene welding or snow blindness. Then we have it produced from internal causes:

1. Disease. Often times patients suffering from certain diseases, will experience a temporary blindness, this is particularly noticeable in patients subject to fainting spells, just before losing consciousness, they will complain of being unable to see.

This condition, however, is transient, and sight is restored as soon as the patient regains consciousness.

2. Tumors of the brain will produce amblyopia, unlike amblyopia caused from astigmatism, or squint, which is usually confined to one eye, while that caused from tumors produces blindness in both eyes. While that in the former is usually only a partial blindness, that in the latter is a total blindness.

3. Toxic amblyopia. This is due to poisoning from drugs which likely produces a retrobulbar neuritis. The agents most in evidence producing this condition are lead, tobacco and alcohol. There are a great many other drugs that may cause this condition, but on account of there being so few cases reported, they are not so seriously considered.

Lead amblyopia is usually found in painters, due to the fact that they are constantly working with this mineral, it is inhaled with the air they breathe and is absorbed through their skin, as they are constantly getting the paint on their hands.

Tobacco has produced its share of toxic amblyopia. It is believed that those who chew or use tobacco as snuff are more susceptible than those who smoke, for when smoking, more of the nicotine, the alkaloid that is responsible for the amblyopia, is burnt up, so not so much of it is taken up in the system.

Alcohol is an agent which is responsible for a great many cases of amblyopia. Before prohibition, ethyl alcohol was the form or kind used, not only straight, but in whiskey, brandy and in other intoxicating beverages. The condition was most noted in men, and usually while or after they had been on a spree.

Since prohibition, however, the restric-

tions caused the ethyl alcohol to be inaccessible, at least to a great extent, and for this reason we are having fewer cases from this form of alcohol, but instead, we have a greater menace in methyl alcohol. The adoption of the national prohibition amendment in the United States, and the possible advent of similar restrictions in Great Britain, make the ocular complications of wood alcohol poisoning a live topic for discussion. The more we restrict the use of ethyl alcohol, the greater is the temptation to substitute methyl alcohol, and so long as methyl alcohol remains the most deadly poison of daily commerce, so long will human eye sight, if not life itself, be menaced by ignorant, careless or criminal handling of this toxic product. As ophthalmologists, says Dr. S. L. Ziegler in an article published in the *Journal of the American Medical Association*, October 8, 1921, we have a double duty to perform. (1) To make an intensive study of the toxic effects of methyl alcohol on the delicate ocular tissues, and (2) to establish a propaganda in preventive medicine that will protect possible victims, whether guilty or innocent. Three fateful factors have increased the danger of wood alcohol:

- (1) Its refinement from a nauseous, vile smelling compound to one as clear and palatable as ethyl alcohol.

- (2) Its fatal cheapness, which has naturally resulted from the increased output and the improved methods of manufacture, and,
- (3) its unusual solvent power which has so greatly encouraged its use in the arts.

In America we have (1) ethyl alcohol, which is either absolute (99 per cent) or rectified (90 per cent); (2) methyl alcohol, which may be either the commercially impure liquid or the purified product, and (3) denatured alcohol, which was formerly composed of ten parts of methyl alcohol and one-half part of pyridine bases, added to 100 parts of ethyl alcohol; but since December, 1919, this formula has been modified by a reduction of the methyl alcohol from ten to two per cent. There is a well founded suspicion that in order to evade the prohibition act, unscrupulous chemists are submitting this denatured alcohol to fractional distillation so as to remove the benzine and wood alcohol and thus secure an impure ethyl alcohol which can be sold for drinking purposes.

In the United States, this production is better regulated, and therefore, the cases of blindness have been fewer, although it is quite possible that many cases have escaped detection and reporting. Wood

alcohol is considered the most deadly poison in daily commerce. One teaspoonful has been known to cause blindness and one ounce to cause death.

It is a protoplasmic poison possessing a selective affinity for the delicate nerve tissues of the eye. Its biochemistry is modified by oxidation, first to formaldehyde and then to formic acid, both of which are corrosive poisons.

Formic acid is the end-product excreted by the kidneys. If formic acid is present in urine, it will promptly reduce Fehling's solution, thus suggesting to the inexperienced a false diagnosis of diabetes.

Sudden blindness with vomiting and abdominal pain should always arouse suspicion of methyl alcohol poisoning; especially if diplopia or ptosis is associated.

Papillitis, sector-like atrophy and sudden sclerosis of the nerve-head are equally typical fundus lesions.

#### Visual Complications from Abuse of Alcohol and Tobacco.

The eye disturbances arising from the abuse of alcohol and tobacco ought to attract attention because they can be easily detected without or before endoscopy and because they can be completely cured by medical treatment if instituted in time. Clinically such patients have poor sight. The disease is a central scotoma of the visual field. There is a distinct trouble in the recognition of the colors, certain colors on small surfaces. While a large surface of color is recognized, a small area of the same color is not.

The scotoma is due to an elective intoxication of the macular region and of the optico-cerebroretinal macular bundle. Ophthalmologic examination shows almost complete integrity of the fundus, so that the syndrome is that of an amblyopia.

Alcoholic intoxication may cause atrophy of the optic nerve, excepting this, the prognosis of alcohol and tobacco amblyopia is usually good.

Terson has never seen a toxic neuritis in an alcoholic who did not smoke, but he has seen pure tobacco amblyopia in excessive smokers who did not use alcoholic beverages. The visual disturbances appear rather suddenly, being immediately occasioned by some psychic or nutritional cause.

The best treatment is abstinence from alcohol and tobacco with general treatment to improve digestion and functioning of the emunctories. Glasses to correct the visual errors should be prescribed.

Tobacco amblyopia generally yields com-

pletely to energetic treatment.

Effects of nicotine on vision. T. B. Bradford makes an appeal to big corporations to put the ban on nicotine as the drug above all others which is liable to cause blindness at a time in the life of an individual when it might cause serious results. This refers especially to railroad engineers and others who depend on the acuity of their vision.

#### ACUTE CIRCUMSCRIBED PERITONITIS OF METASTATIC ORIGIN SIMULATING APPENDICITIS\*

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The term primary idiopathic peritonitis has been used in two senses. Under a view formerly held the inflammation attacked the peritoneum *ab initio*. Its origin was usually attributed to some indefinite agency such as "rheumatism" or "cold." More recently it has been recognized that peritonitis is practically always of infective origin and Flexner applied the term "primary peritonitis" to cases in which there was no local focus in the abdomen to account for the infection, it being assumed that the infecting micro-organisms are conveyed to the peritoneum by the blood or lymph channels, from some other part of the body. "Endogenous metastatic infection of the peritoneum" is more descriptive of the process and the terms "primary" and "idiopathic" as here applied are being used less often.

As to the frequency of cases originating in this way there is considerable variance in different statistics. Osler states that of 102 cases of peritonitis which came to autopsy at John Hopkins, twelve were of this form. Elsner's material reduces the number far below these figures. Benda's records show that of 446 cases of peritonitis examined after death, two were of hematogenous and 35 of unknown origin. Rolleston gives its incidence as about 10 per cent of all cases of peritonitis and believes that about one-half of the cases of pneumococcus peritonitis are of metastatic origin.

These figures are for cases that came to post mortem. Accurate statistics for non-fatal cases in which the process is mild and circumscribed probably are not obtainable.

It is true that a minute local focus might possibly be overlooked in the absence of an exhaustive post mortem examination, and

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some have been unwilling to recognize a metastatic origin for peritonitis. However, if the condition occurs with anything like the frequency the figures just quoted would indicate, or if it occurs at all, it must be acknowledge that it is of some surgical interest.

Considering how frequently the other two great serous cavities, the pleura and pericardium, are inflamed by metastasis, it is not surprising that metastatic inflammation of the peritoneum should occasionally occur.

It is of course true that peritoneum, lying as it does, in contact with the germ-laden digestive tube, the biliary tract and the internal genitals in the female, is so commonly involved in inflammation attacking these organs that its infection in any other way is of decidedly secondary clinical importance.

A recent article by E. Palier under the title "Peritonitis Acuta Circumscripta Catarhalis, A New Disease," was based upon the observation of several cases in which localized pain and tenderness in the abdomen with fever occurred, preceded usually by indications of some infection of the throat or respiratory tract. None of these cases came to operation or autopsy, so that the propriety of designating the condition a new disease, or even the correctness of the diagnosis itself might be questioned. However, two cases have recently come under my observation which confirm me in the opinion that we may have an acute circumscribed peritonitis originating in some infective focus elsewhere in the body, just as we have the more commonly occurring metastatic inflammation in the pleura, the pericardium or the joints. I do not refer to cases which are not uncommon in which a peritonitis is secondary to a metastatic infection of the appendix or some other organ underlying the peritoneum. In the cases I report there was so far as could be determined no inflammation of the appendix or any other organ in the vicinity which could reasonably have been regarded as the origin of the peritonitis, although in both the serous coat of the appendix was involved in the process and in both the preoperative diagnosis was acute appendicitis.

A girl of six became ill with abdominal pain. There was no diarrhea and no vomiting. The pain continued in the lower abdomen worse on the right side. The patient was seen the next day, 36 hours after the onset, at which time the temperature was 102. The lower abdomen was extremely tender, considerably more so on the

right side. This history and the examination clearly suggested appendicitis and an immediate operation was advised.

At operation the caecum and small bowel in the neighborhood were found hyperaemic and red. The appendix was also slightly congested but less so than the adjacent bowel. The appendix was removed and the wound closed without drainage. the convalescence was without incident but the temperature was 99 1-2 to 101 for several days. Careful examination of the appendix showed no involvement beyond a slight congestion of the peritoneal coat.

The second case was that of a young man of 18. Twenty hours previously he was seized with pain in the right abdomen and vomited once. There was no diarrhea. He had been vaccinated several days before and there was a large scab with underlying pus and the usual red halo surrounding it. The temperature was 102 1-2. There was quite marked tenderness over the right abdomen, the greatest intensity being slightly above McBurney's point. There was also some tenderness over the right loin and on deep pressure behind. The urine was negative.

A diagnosis of acute appendicitis probably retrocaecal was made. At operation a condition similar to that of the previous case was found. The appendix and all the intestine that presented in the wound were congested and red. The gall bladder and kidney were apparently normal. The appendix was removed and the abdomen closed.

There was considerable post-operative fever for over a week which gradually subsided, and much more pain for several days than is usual after an appendectomy. Examination of the appendix showed no lesion other than a slight congestion of the serous coat.

In any attempt to explain the origin of the peritoneal infection in these cases the appendix must, of course, be considered. The macroscopic appearance of the appendix certainly did not in either case suggest that it was infected. In each case it appeared normal except for a slight redness of the peritoneal coat. It is conceivable that a microscopic abscess of the appendix was overlooked though such an explanation seems rather far-fetched.

Brunzel in 1915 reported ten case of peritonitis in which it was impossible to trace the inflammation to a local source. In one,

as in my second case, the sole focus to be diverted was on the arm. In two the patients had been having acute tonsillitis. He also reported three cases in which the symptoms led to the diagnosis of appendicitis and in which the appendix was found to be apparently normal.

Another possibility is that an inflammation which originated in the mucosa of the bowel might have extended through the wall of the intestine and involved the peritoneum. Lemander in 1907 gave detailed histories of fifteen cases of peritonitis consecutive to enteritis and colitis. He found in some a comparatively small part of the bowel inflamed, with lymphangitis and secretion into the peritoneal cavity of serous or purulent fluid. In my cases there was no diarrhea and no other symptoms suggesting involvement of the bowel lining.

**Discussion:** Dr. G. A. Wall, Tulsa.

It is claimed by many good authorities that a metastatic peritonitis does not exist as a diffuse peritonitis and later becomes localized. It has always been my opinion that all cases of a circumscribed peritonitis have been caused by a direct infection from some of the adjacent viscera. When we know that the intestinal tract is full of bacteria, I do not see how we can go out looking for some infection, which would have to take such a roundabout way, as through the blood stream or the lymphatics to cause it.

The so-called inflammations of cryptogenic origin, only means that we have been unable to find the cause, for I am of the opinion that all inflammations must have a definite cause somewhere, and the reason that we do not find it, just emphasizes our helplessness in many conditions which are obscure.

The two most frequent bloodborne organisms of importance, are the pneumococcus and the streptococcus, and Ruppner says that these are the ones almost exclusively found in metastatic peritonitis. He thinks that tonsillitis is a very frequent cause.

Statistics would seem to show that most cases of peritonitis of unknown origin are of the diffuse variety and in many instances are fatal.

Unless the patient dies and comes to autopsy we have no manner or means of proving our diagnosis, hence I believe we should go very slowly in making our diagnosis of a metastatic form. Even after an

autopsy we may still be in error, because we have exhausted our resources is not yet proof positive that some condition somewhere, has not been found.

There are so many sources of infection in the abdominal cavity that it is hard to believe that a metastatic peritonitis occurs with any particular frequency, and this especially applies to the local condition, such as existed in these cases here reported.

I am fully convinced that many times, especially about the cecum and terminal ileum, Jackson's membrane plays an important part in the apparent inflammatory condition of the appendix and adjacent peritoneum, and the inflammation is not a true one, but is mistaken for a localized peritonitis. In these cases you will have pain and tenderness over the appendix region and all the clinical signs of an appendicitis, excepting the muscular rigidity which should be present in all active inflammations at this point. In the diagnosis of acute appendicitis, tenderness without rigidity, should cause the examiner to stop and ponder.

The case of the little girl would not be conclusive evidence to me that she had an acute appendix, and the operation proved that she did not, neither would it have been proof that she had a metastatic inflammation.

The blood and urinary findings would have thrown much light on the condition, as would have an examination of the chest and throat. In my opinion in small children with an acute abdomen we should, by all means, go over the chest very carefully, to exclude any pulmonary trouble. Many times children complain only of abdominal pain, and give all the evidences of an intra-abdominal condition, when an examination of the chest shows them to be suffering from pneumonia or a severe congestion of the lungs. This is readily explained when we know that the thoracic nerves serve the parietal peritoneum and the diaphragm at its junction with the chest walls. In the case of the little girl it would seem that a pylitis might have been present. The post-operative course would indicate the removal of the appendix did not relieve the condition.

The evidence presented in case two does not seem to me to be sufficient to warrant a diagnosis of a metastatic peritonitis. The post-operative course in this case does not appear to be such as we would expect following a clean appendectomy, hence the cause for the symptoms must be sought for

elsewhere. In this case I would again suspect Jackson's membrane which I am very sure could account for the condition, if present.

I am of the opinion that we are all of us, too prone to jump at our diagnosis, especially in the case of a lower right side pain, hence we are often abashed at the finding of a perfectly, or nearly normal appendix. Our examinations in this symptomatology are too limited, when they should be more carefully made, if we would avoid considerable embarrassment in explaining away our mistake.

Dr. Ralph V. Smith, Tulsa.

The paper just read should serve to open a free discussion. Since the term idopathic peritonitis of the older clinicians has fallen into disuse, very little has been written of the many obscure peritonites, seemingly of unknown origin, but which we now know to be bacterial. In the absence of any offending adjacent organs they must come through one of two sources, the blood stream or lymphatics.

When we consider the many distant infectious processes, such as infection of the bone marrow, or infectious endocarditis or pericarditis, or the hemitogenous kidney, it is not altogether unreasonable to believe the peritoneum should not become involved. There is no reason to think it should be immune. Yet because the peritoneum covers so many hollow organs that are constant sources of infection, one is not justified in making diagnosis of hemitogenous peritonitis unless all possible chance for local infection is eliminated by the most careful clinical and laboratory methods.

I know of no method whereby a differential diagnosis between an acute appendicitis and the condition described in the paper just read may be made. The Doctor was justified in opening the abdomen, but as stated by him, he may have overlooked a minute abscess that would act as a local foci. This is particularly true, as it is well known that there are more infectious organisms in this part of the alimentary track than anywhere else. Very often a pin point perforation of a typhoid ulcer will cause a peritonitis with or without abscess, yet the typhoid be so mild as to be not recognized.

The acute circumscribed peritonitis described by Palier as a new disease can be none other than the type of peritoneal involvement that has long been known to accompany some cases of rheumatism and he is scarcely justified in calling it a new disease. In his experience these cases succumb

to the use of salicylates especially strontium salicylate.

Robinowitz in American Journal of Medical Science described eight cases of acute hemitogenous peritonitis in which he located the foci of infection in the mouth or nasopharynx. (Altogether a safe bet in absence of any other new foci!) These cases were the more diffuse type and presented the same symptoms as any infectious peritonitis.

The pneumococcic peritonitis may be either circumscribed or diffuse. These cases especially run high leucocyte count and high temperature. The parietal peritoneum is often involved in which case the abdomen will present a rather doughy feel rather than the hard board like abdomen. In this type, if diffuse, the treatment should be expectant while in the localized cases operation should be resorted to.

In closing, I shall say that I believe a certain per cent of all cases of peritonitis are of hemitogenous origin but they should not be definitely said to be such until all other foci shall have been eliminated.

#### PROPAGANDA FOR REFORM

##### Council on Pharmacy and Chemistry American Medical Association

Collosol Calcium.—E. E. Prest (Brit. Med. J., Jan. 14, 1922) recommended a new "collosol" brand of so-called colloidal calcium for the treatment of tuberculosis. T. C. Graves (Lancet, Nov. 4, 1922) discussed "Colloidal Calcium in Malnutrition, Chronic Sepsis and Emotional Disturbances." The publications of Prest and Graves serve as uncritical endorsements of another addition to the Collosol preparations. The conclusions reached by Graves concerning the beneficial action in the treatment of "Emotional Disturbances" do not seem justified by the character of the evidence he presents. Such results as he reports are common experiences without the use of medication. There is no basis, either in theory or in the evidence presented, for administering a calcium salt in colloidal form; if advisable, soluble compounds of calcium such as the lactate and chlorid may be administered hypodermically. Thanks to the timely report of the Council on Pharmacy and Chemistry, the Collosol preparations are not being pushed in the United States though they are being actively exploited in England. (Jour. A. M. A., Aug. 4, 1923, P. 409).

Two More Electronic Diagnoses.—A physician reports that one of his patients became alarmed by a diagnosis of generalized carcinoma made by an osteopath who is a disciple of Albert Abrams. In order to test the diagnostic ability of this disciple of Abrams the physician had the patient send the Abrams disciple a specimen of blood (which was taken from a young rooster who had been confined to his coop since birth) for diagnosis. The diagnosis which was received showed syphilis, gonorrhea, generalized carcinoma, sarcoma of the spine, chronic malaria and diabetes. Another physician reports a diagnosis made by an

Abrams follower on a man who is working and by no means ready to die. The diagnosis showed "diminished resistance" (an Abrams euphonism for syphilis), "carcinoma of gall bladder," "streptococcus," "sarcoma of both kidneys, right worse," "tuberculosis both lungs, upper right and middle left," "sarcoma," "gall stones," "malaria" and "pneumonia." (Jour. A. M. A., Aug. 11, 1923, P. 493.)

Tapeworm Remedies.—Oleoresin of aspidium and pelletierin tannate are the remedies of choice, the first being more popular. To give the remedies the best chance for action, the intestinal contents should be reduced as much as possible by restriction of solid food and evacuation before the treatment. On the morning of the treatment the patient should stay in bed and be given from 6 to 8 gm. of oleoresin of aspidium divided into as many capsules in the course of 10 to 15 minutes. Two hours later a saline cathartic should be administered and repeated every two hours until thorough evacuation has been secured. (Jour. A. M. A., Aug. 11, 1923, p. 495.)

The Chlorin Antiseptics.—The essential attributes of Surgical Solution of Chlorinated Soda—N. N. R. is a definite but mild alkalinity, hypertonicity and presence of the correct amount of sodium hypochlorite. Because hypochlorite solutions are unstable and their active component is not available in solid form, chloramin-T, dichloramin-T and halazone were evolved. The first two have been received as worth while additions to our materia medica. Because the three products contain their chlorin in its less stable modification, the composition and purity of these products have been watched by the A. M. A. Chemical Laboratory. Recently, P. N. Leech of this laboratory reported on the quality of the market supply of American-made chloramin-T, dichloramin-T and halazone, which are described in New and Non-official Remedies. Out of eight specimens of chloramin-T, one was considerably substandard, two were slightly substandard and five were satisfactory. The chloramin-T tablets, chloramin-T pastes and an aromatic powder were satisfactory. Two out of four specimens of a surgical powder were markedly decomposed. All the specimens of Council-accepted dichloramin-T complied with the standards. Re-examination of specimens of the chloramin examined five years previously showed that chloramin-T and halazone are quite stable, but the dichloramin-T specimens had decomposed somewhat. Leech believes that both the hypochlorite preparations and the schloramins are active oxidizing agents because of the positively charged chlorin atom which they contain, and that their antiseptic action depends on this. He determined that the oxidizing power of chloramin-T is much greater in neutral than in even slightly alkaline solutions. From this it is apparent that one strength of a solution of pure chloramin-T may be active as a germicide while a solution of the same strength containing sodium bicarbonate may be ineffective. (Jour. A. M. A., Aug. 19, 1923, p. 581).

Bismuth Preparations in Syphilis.—The Council has issued a statement of the present status of bismuth preparations in the treatment of syphilis. In this report the history of the use of bismuth salts in the treatment of syphilis, the evidence of the value of bismuth salts as compared with mer-

cury preparations and arsphenamine is considered and the dosage and danger of untoward effects are discussed. The statement of the Council concludes with the following summary:

1. Bismuth preparations have a sufficient experimental basis both for their favorable effects and limitations. The advantage consists in their distinct action on experimental syphilis. The limitations are clear, if one considers the disproportion between the large dose, which is necessary to sterilize an animal, and the small dose, which can be tolerated by man. The available information appears to show that bismuth preparations will not cure syphilis, when used alone.

2. Bismuth treatment is not usually injurious if the necessary precautions (observations for beginning stomatiti, examination of urine, etc.) are observed. Intravenous injection is to be strictly avoided. The therapeutic effect of bismuth is rated by the majority of authors between arsphenamine and mercury. Bismuth compounds may be valuable in cases in which the patients are intolerant to the other drugs used in the treatment of syphilis or resistant to them, as shown by a persistent positive Wassermann reaction. (Jour. A. M. A., Aug. 25, 1923, p. 661).

The Thyroid Hormone.—The fact that the iodine-bearing compound, thyroxin, which has been isolated from thyroid tissue, has a marked physiologic potency has led many persons to speak of it offhand as the "active principle" of the thyroid glands. However, Reid Hunt has carried out tests which indicated that for certain functions at least, thyroxin shows less potency than an equivalent dose of iodine in the form of the entire thyroid gland. One is led to ask, whether the iodized protein fragment represented by thyroxin retains all of the specific physiologic action of the real thyroid hormone. Hektoen, Carlson and Schulhof report that they have detected the presence of a thyroid product, thyroglobulin, in the lymph issuing from the thyroid gland, but failed to detect the same protein in the blood stream. (Jour. A. M. A., Aug. 25, 1923, p. 665).

Albargin Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry declares Albargin inadmissible to New and Non-official Remedies because (1) it is an unessential modification of silver nitrate and (2) therapeutic claims made for it are unwarranted. Albargin is a product of the Farbwerke, vorm. Meister, Lucius and Bruening, Hoechst, A. M., Germany, marketed in the United States by the H. A. Metz Laboratories, New York. It is claimed to be a compound of silver nitrate with gelatose containing 15 per cent. of silver. Albargin is claimed to combine the advantages of albumin compounds of silver and of silver nitrate. It is claimed to dialyze through animal membrane and, therefore, to possess far greater power than other albumin compounds of silver. It is claimed to produce neither irritation nor pain. The Council found that the silver of Albargin was not combined with the gelatose, but is in the same condition as the silver of silver nitrate; that it does not dialyze through animal membrane and that its antiseptic value is the same as that of a silver nitrate solution of equal silver content. (Jour. A. M. A., Aug. 25, 1923, p. 677).

# THE JOURNAL

OF THE

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### EDITORIAL

#### TEACHING NURSING FUNDAMEN- TALS IN OUR SCHOOLS

A few recent experiences, replicas of those experienced since things medical have engrossed the writer's attention lead to the conclusion that a great deal of good could be accomplished in a relatively short time, say ten or less years, if a short system of the well known, tried fundamentals of nursing could be taught for a few weeks, an hour a day during some term of the high school life. These experiences prompt the suggestion: A visit to a patient in a very modest little place, the place clean enough, the patient in the middle of the room, con-

venient to the few stray whiffs of fresh air that might have been circulating. He was occasionally nauseated and vomiting and had been in that state for two days, no physician had been called, for they thought it would soon pass away. In the meantime the patient had suffered, suffered needlessly and a great deal. His needs could have been supplied in the interim before the doctor's final call and arrival on the scene by the simple substitution of small quantities of hot water instead of the copious drinks of ice water he had had, each of which induced more vomiting, and with that more pain, for he had a well pronounced gall-bladder infection. Not a vestige of cold, iced cloth was to be seen about his forehead or throat, though they are well known to those grounded only in the simplest tenets of nursing knowledge, nor had any such simple aides been called into service. A dose of epsom salts—the vilest of all things in his state—had been negotiated, the rebellious stomach at once rejected them, though as vile as they are, a part might have reached the intestine, below the rejection line and served as their intended purpose had the people only been versed in the simplest fundamentals of home nursing. Another case, almost a duplicate of the first, as to symptoms in the main at least, was seen that evening. The man had been ill two days, two physicians had seen him, and though he had a frank acute indigestion, not secondary to anything, neither of them had thought that they were adding insult to injury in directing that his stomach be deluged with their various messes, sent down by the druggist for that purpose. Neither of them apparently had become acquainted with the timely and necessary efficacy of a well-timed hypodermic in such cases, so the man suffered on. He was, like the first case seen, accorded the same class of general mis-treatment as to home nursing. The same immense deluge of ice water, but none where it was needed, on his head, throat, neck and chest. One visit, accompanied by the carrying out of most childish instructions with an ounce prescription and a hypodermic sent the man who had needlessly suffered for two days, back to his work almost immediately.

These things we do not like. We do not believe they are necessary at all. We believe that thousands of people suffer unnecessarily simply because the people who crowd around them with every wish to help are themselves utterly helpless in devising proper means to help the victim. It is admitted with humiliation that yet, not-

withstanding the great strides in medical improvement along every line, we have with us the physician, the physicians by the hundreds who know not what to do, for the very simple reason they have never grasped the full significance of cause and effect in these simple cases. We can only see one remedy for a part of the evil, and that lies in teaching a brief course to the high school girl, especially in the fundamentals of nursing, she should not have the word "doctor" or "medicine" mentioned to her, but she should know why one vomits, why the head aches, why there is diarrhoea, and then what she has at hand, not medicine to combat them with. All this can be done in a few brief days of instruction, much of it would "stick" to the end of her life and much human misery would be obviated.

### THE CLINIC SYSTEM—UP AND GOING STRONG

Scene: A Chicago Great Western Pullman car, Kansas City to St. Paul. Passengers are up, packs are being closed, the porter busily brushing off the passengers preparatory to leaving the car at some point not yet within easy call of St. Paul by any means. The conductor passes through the car, returning to those who wish their tickets taken up that morning. He hesitated at the writer's seat, "Do you wish to get off at.....?" "No, why?" "Well, I didn't know, most everybody wants to get off at that place in order to get over to the Mayo's at Rochester, lots of people go there." This episode, brief and apparently harmless as it appears on the surface, gave the writer some food for thought. He could not help wondering, and especially so on being told that he was not the only one who had heard practically the same thing that morning. As one passenger, with unusual perspicacity put it, "He seems to think everybody riding this train up in this direction wishes to get off and have something cut out at Rochester." Of course the very eminent gentlemen and their eminent associates at Rochester have nothing to do with this, nevertheless, it leaves a bad taste all around. It is said, speaking on the same subject, that some road running west out of Chicago has an evening or afternoon "Special" car, labelled "The Rochester Special" or the "Mayo Special" or words to that effect. We cannot refrain from suggesting a little improvement over this announcement. Why not have on the tail end of this long line of luxuriousness, the

legend, "Climb on here, get off at Rochester, go to bed when you get there, wake up an hour later, sans appendix, sans gall-bladder, sans prostate, sans everything." It ought to create more business for the enterprising passenger line. Evidently some passenger agent has been "asleep at the switch," for he has overlooked a splendid opportunity to do the great unlettered, uninformed public a great service, incidentally he will serve his Rochester friends in a fine manner by bringing to their net many patients of the pay high as you go class. Someone should awake that road to this lost but not yet too late opportunity.

### THE GREAT MAGNITUDE OF THE ROCKEFELLER FOUNDATION WORK

A report of the expenditures and efforts of the Rockefeller Foundation "A Summary for the First Decade" just issued by authority of Dr. George E. Vincent, President of the Foundation, throws some light on the immensity of the work, little realized or appreciated by the uninitiated.

Apparently no spot where help is needed which may be reached, even if superhuman discomforts are to be encountered, is neglected. Alberta has a wonderful medical building; Prague, Czechoslovakia has its work; the Philippines; Bangkok, Siam; the Peking Union Medical College. (This institution really performed unbelievable feats in succoring the wounded in the recent battles in the environs of Peking); Soochow; the Southeastern University (China); Gratz, Bohemia; London; the "Ubiquiteers of the School of Hygiene and Public Health, Johns Hopkins University; Ecuador; Ceylon; Siam; the Mississippi negro; India, in fact no spot seems to have been neglected of effort and honorable mention for the work performed. Some idea of the vastness may be obtained on knowing that the decade May, 1913, to May, 1923, shows a cash expenditure of \$18,188,838.00 for public health work alone. For medical education there was expended the sum of \$24,716,859.00; for war work, \$22,298,541.00; for biology, physics and chemistry, \$5,678,599.00 and on miscellaneous matters, \$4,503,123.00. The modest sum of \$1,107,174.00 was all that was requested to handle these vast sums. (Some of our Oklahoma office holders and spenders of the taxpayers' money should take a glimpse at this report and harken to its lessons.) The total thus expended for the decade is

\$76,757,040.00. All hail to Rockefeller and his great idea. Did he do like so many of our American idle rich, crawl off to some European resort and allow a suffering world to go hang? He did just the opposite. He is giving almost his total fortune, reserving a very modest amount for his personal needs only, as did Mr. Carnegie. It is a pity that others of that class, Mr. Henry Ford, for instance, who, so far has seen fit to build one puny hospital and that in Detroit for his own particular flock, cannot see what agents the Creator evidently intended they should be for the relief of human suffering. Comparisons are odious we know, but like Banquo's Ghost, they will arise to confront us despite honest effort to keep them in the background. The Rockefellers have gone into the darkest patches of Africa, set up laboratories, educated the natives in every phase of disease prevention, cleaned up literally hundreds of thousands of acres of disease breeding swamps, sterilized millions of infected people, made yellow fever a thing to be listed with that of the past, made malaria an unknown disease, hookworm a stranger to thousands who had been rendered unfit by its ravages. In this, the keen and able executive ability of Dr. Vincent should not be overlooked. Perhaps no better agent could have been secured to have performed this great task and keep it on par with what its demands require.

#### WATCH YOUR STEP

The indictment of certain conditions set forth by the partial quotations printed below, from the August issue of the Illinois State Medical Journal, so well states the actual facts as they exist, not only in New York and Chicago, but in Oklahoma cities as well, that we cannot do better, if attention is called to the matter, than reproduce it as the Illinois observer has stated it in his article. That the entire activities of many of the people handling unfortunate venereals is actuated, not by any real desire to benefit the victims, but merely to place themselves in the limelight, is a fact too well known to need repetition. These same "self-sacrificers" will not turn a hand, on the contrary, they do callously see suffering all about them, take no action whatever to alleviate it, unless and until, some nosey newspaper reported is on hand to "now watch me help this poor suffering mortal."

"While the world war was on there undoubtedly was a need for many drastic rules which were put into force by health

authorities because the efficiency of the nation's man power was at stake. The war is over, and now we should return as nearly as possible to normal. Certainly the constitution of the United State, which grants freedom from oppression to all should be lived up to, and oppressive health laws or health regulations that were put in force during the emergency should be rescinded or repealed."

"Too much stress is being put on the dangers of venereal diseases by health officers who pay no attention to the time when the disease was contracted or whether it may be active or chronic at the time of examination. Especially is this true of syphilis. Many found to be suffering from this disease are not in an infective state, but are suffering from the end results of the disease rather than from the disease itself. I am referring here to paresis, tabes, (locomotor ataxia) and to many of the late manifestations of syphilis."

"Too much credence is put into the Wassermann or blood test. This test very frequently is not positive evidence that syphilis is present. Without positive clinical symptoms, and without a history of an initial lesion (chancre) the Wassermann blood test should be discounted and the patient given the benefit of the doubt, with instructions to report from time to time for further going over and watching."

"It has long been the policy of those in charge of health department examining rooms to condemn as infected with syphilis those who show even the slightest degree of a positive Wassermann. I have frequently seen girls sent into Lawndale Hospital here from the Chicago Health Department on a "suggestive positive" without a single bit of clinical evidence of syphilis being present. A case with a four plus Wassermann without active lesions should not be quarantined, for a four plus may be found in those suffering from tertiary syphilis as well, as from the secondary type of this disease. The clinician examining these cases should under no circumstances, without determining first the stage of the disease, (syphilis) even think of quarantine."

"If every individual in the United States whose blood showed a syphilitic taint were put into forced quarantine, I greatly fear that the scandal created would quickly bring hasty minded health officials to their senses. Certainly lawmakers would fight to have repealed, laws that are inimical to social liberty. Syphilis and gonorrhea are too prevalent in society for society ever to give its free consent to the forcible quarantining of all its members found infected.

"Unfortunately, the 'infected woman' who has been found out because of her error becomes the prey of many anti-social beings who are more bent on exposing sin than they are in punishing it. This poor creature of the streets becomes the bait which lawmakers and health officers offer for publicity which they mistake for fame.

"Morals courts everywhere are taking their toll in fines from misguided girls who had been given a chance for their 'white alley,' might have come back to become splendid women. The fining and punishing of prostitutes by judges is their way of salving the consciences of a morbid society which says 'punish those foolish enough to be caught.' In other words, the fines collected are licenses to practice prostitution. The courts would be horrified at such a statement. I am not inclined to withdraw it for the reason that hundreds of those fined repeat their offense and are arrested again and again. This fining occurs time after time with the same women. Rarely are the 'quick' women who infest all of the large hotels over the country ever arrested. Nor are the kept women whose numbers are legion, ever disturbed.

"I know of no more vicious institution in the country than that institution known as the 'Morals Court.' One Chicago judge, realizing the hopelessness of those brought before him and his own helplessness, committed suicide rather than function further in the Chicago Morals Court.

"In Chicago the Morals Court functions because of an apathetic society. If Chicago citizens knew a part of the real truth of the indignities heaped on the heads of female offenders arrested for alleged sex offenses, they would demand that the court as at present organized be done away with or at least that its functions be limited. Every morning young girls (first offenders) are found herded with groups of old timers whose very presence is demoralizing, being led to that hell hole of iniquity, the Morals Court examining room run by the Chicago Health Department. Before reaching this room these same girls are led with hardened characters after a night in jail, having been forbidden bond or the privilege of communicating with friends, through a crowd of pimps, macques, curiosity seekers, et al, who congregate at the La Salle Street entrance of the City Hall to view this dejected group as it is taken from the patrol wagon to the elevator under heavy police guard to the seventh floor of the City Hall. After examination, mind you, before trial, the procession again begins its sad journey to the Morals Court, to again have further

indignities heaped upon it, by curiosity seekers and court hangers-on whose only occupation seems that of preying on the sorrows of others. These human vampires who infest the courts take insane delight in listening to the tales of the girls themselves and to the abuse of the Health Department law clerk whose duty it is to see that nobody goes unpunished, and who argues that all be sent to the Contagious Disease Hospital. Law clerks of this type are to be found in nearly every Morals Court and are sadistically inclined in that they view with insane delight the suffering of others and enjoy inflicting it. Late in the afternoon marks the trip in a patrol wagon to the Chicago Contagious Hospital under the control of the Health Department, THE GREATEST SCHOOL FOR PROSTITUTES IN CHICAGO, where first offenders are compelled to associate with old timers and to learn from them how to make further progress on the road of social iniquity.

"There is no such thing as attempting the rehabilitation of sex offenders at this hospital. The women are there for the time being in prison. The Contagious Disease Hospital is Chicago's second bridewell. Many estimable women have made numerous attempts to help the women confined there but without success. Women sex offenders are not allowed to see their friends except through heavy plate glass windows nor are they allowed to converse with them except in this way. Women with active gonorrhea and active syphilis are herded with those whose infection is chronic, thus rendering absurd the dictum of quarantine, which says that those found actively infectious or contagious shall not come in contact with those not suffering from an active or contagious disease stage of a disease. It is a well known fact that one case of gonorrhea does not confer immunity against the chances for further infection. This is also true of syphilis, for many cases of a new infection have been reported.

"Women are being discriminated against. They are being held while their male partners are allowed to go scot free and to continue on the rosy path which leads in so many instances to further destruction of others. Men known to be infected and to be in a highly contagious stage of either syphilis or gonorrhea are dismissed with instructions to visit a physician or a clinic. It is a well known fact that they continue to seek the company of women and thus spread their infection to many. Rarely are they watched nor is any special attention paid to them. They go on, their disease

spreading orgy unhindered. Men are the conveyors of venereal diseases thus making misguided women their spreaders. Truly does the woman of the streets become a type of social avenger, worse by far than the gun carrier. Once she realizes that the hand of all mankind is turned against her, at that moment begins her desire for revenge."

"You ask me, 'Have I a solution?' Yes. Change the whole order of things as they are at present constituted in society. Teach men to view women as potential mothers rather than as potential prostitutes as is the vogue at present. Teach women to regard their bodies as being holy and not for defilement. Teach both sexes to regard themselves as future progenitors of a race that will live up to a moral code which will teach that the body is too sacred to be profaned. Teach children the truth about themselves.

"There is nothing wrong in teaching a child the source of its being and in teaching it respect for that source. Parents cannot begin too early in this teaching. Sex consciousness comes with the asking of the question 'Mother, where did I come from, who made me?' This fact should be realized by parents who so persistently refuse to answer their children's questions concerning the origin of life. By teaching children when very young and thus gratifying their desire for wholesome truths about their source of being is for parents to lay up for themselves a treasure to be spent at some future time. Children properly instructed are wise—no wise person ever seeks its own damnation.

"Girls and boys go wrong because of ignorance, rarely do they fall into social error if they possess a full knowledge of themselves. This fact must be learned if parents are to expect the best from their progeny.

"To sum up: Repeal vicious war time health laws; check up on the actions of lawmakers, in other words, curb their wild tendency to seek legislation for everything; curtail the authority of the Morals Court, or else abandon it; stop the humiliation of hundreds of women by those who have their prosecution for alleged moral offenses in hand, and who are employed solely to defeat the aims of justice; force parents to begin instruction of their children early, in order that they may grow up feeling that their actions in life are divinely directed, and that they have a place in the world to fill. To follow out, this summing up means labor and yet it is worth while for what is finer than to watch properly directed youth

work out its destiny? In closing, let me utter a word of warning to my friends in the profession:

"Every time a health officer has a brain storm he rushes immediately to his local city council or to the state legislature to have a law passed. If this keeps up much longer those who sneeze in the confines of their own rooms will be compelled to make a report of the sneeze to a health officer. The medical profession is in a state of lethargy. If it is not careful it will not be long before it will find itself strangled by those whose only conception of government is the passing of laws intended to limit the scope of its actions. Our system of government is fast becoming too paternalistic. There is too much tendency on the part of many to place all health control measures under state or federal government control. It is hoped that the medical profession will wake up before it is too late."

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To County Secretaries:

Dear Doctor:

At a meeting of the Council, held at Tulsa, July 27, I was instructed to advise you of certain parts of its transactions, and that you be requested to read the same at your first fall meeting.

The parts of the resolution to which it is desired you call the attention of your members reads as follows:

"Whereas; There have recently appeared in the lay press illustrated write-ups of some of the members of this Association, and;  
Whereas; The purport of these articles is to say 'Who's Who' in Oklahoma medicine,

Therefore; be it resolved; By the Council of the Oklahoma State Medical Association that these articles are not consistent with ethical medicine, and the best interests and high standards of our profession and savor too closely of paid advertising, and,

Be it further resolved; That the Council is not in accord with this action of the members who have countenanced these articles for publication, and in the future members shall refrain from any newspaper notoriety which savors of impropriety."

It was directed that copies of this resolution, with certain names and obvious features deleted, be mailed to the people concerned and to the various county societies, to be read at their earliest meetings; this, to prevent repetition of the practices under consideration.

Fraternally yours,

C. A. Thompson,

Secretary, Treasurer, Editor.

## REPORT OF THE SAN FRANCISCO MEETING.

—Dr. W. Albert Cook, Tulsa, Oklahoma.

Arriving in San Francisco Sunday morning, the day before the convention formally opened, I found in my mail an invitation from Dr. W. E. Musgrave, chairman of the California Committee, requesting my presence at his home at two-thirty that afternoon at an informal social gathering of national and state officers and committee members interested in the success of the seventy-fourth annual convention. This meeting was fairly well attended, although it was a little early for a large attendance as only a small number had arrived at this time.

Dr. Musgrave proved a very efficient chairman, and with his able assistants, left nothing undone in the way of social and scientific entertainment—in fact there was so much doing that the days were too short to take in more than half of what was going on.

Monday morning at ten A. M. the House of Delegates was called to order with sixty-nine delegates present in person, two of whom were your delegates, and Drs. Claude Thompson and E. S. Lain came in shortly. The credential committee were the only ones who did anything the first day and they were quite busy in the morning session as well as the afternoon session.

At the afternoon session the chairman announced his Reference Committees and Oklahoma was recognized as the writer was named on the Committee of Medical Education which is composed of the following members:

F. B. Lund, Chairman.....	Massachusetts
Frederick Epplen.....	Washington
Randolph Winslow.....	Maryland
Cornelius Van Swalenburg.....	California
W. Albert Cook.....	Oklahoma

Monday night I had the honor of attending a banquet given at the Bohemian Club by the Ophthalmologists of San Francisco in honor of the president, Dr. George de Schweinitz.

The business transacted by the House of Delegates has been so fully reported in the Journal that it is unnecessary for me to go into details, and the Association was very fortunate in getting a man like Olin West to take the place of the deceased secretary, Dr. Alexander R. Craig.

The Volstead Act came up at different times, but the excellent chairman of the House, Dr. Warnshuis, very promptly referred it to the Committee on Miscellaneous Business where it died a natural death as it was not thought best for the Association to go on record for or against liquor as there has been some unfavorable criticism of the actions of some members of the profession who

have over stepped the bounds of their profession in issuing prescriptions indiscriminately for alcoholic liquors.

The writer had the privilege of representing our state at the 1915 session of the A. M. A. which was also held in San Francisco at which time the civic auditorium had just been completed and it was such an ideal meeting place that I think it had much to do in getting the recent meeting there. This auditorium is so arranged that the exhibits were all on the main floor and the sectional meetings were provided for by numerous rooms throughout the building, which made it very convenient to have the House of Delegates, all committees, all sections and exhibits under one roof and this being close to the business center of the city.

The open meeting Tuesday evening was very largely attended and the address of welcome by supervisor Ralph McLeran who represented the Mayor, was very hospitable and concise and assured us that the whole city entered into the spirit of entertaining us while we were there.

Dr. Brainerd, president of the California State Association, 1922, and Dr. Edwards, president in 1923, gave short addresses of welcome showing us that the profession of California would leave no stone unturned to make our visit a memorable one, after which the president elect, Dr. Ray Lyman Wilbur, was introduced by the retiring president, Dr. de Schweinitz, who delivered an address on "Human Welfare and Modern Medicine" which was very practical and mutually interesting to the profession as well as the laymen who were present in large numbers. The address of president Wilbur was printed in the last issue of the Journal in June so any of you who have not read it and care to do so can easily find it.

The president's reception at the Fairmont Hotel was the real social function of the Meeting as three ball rooms were filled with beautiful women, adorned with precious jewels.

The next three days were devoted to sectional work, except the closing session of the House of Delegates which occurred Thursday, and the principal business performed at this session was the election of officers and the 1924 meeting place. Dr. W. A. Pusey of Chicago, who was elected president is very popular among the profession and a very congenial companion on the golf course, so I am sure he will fill the office very satisfactorily to all members. Dr. Lain invited the Association to meet in Oklahoma City but with the support of Dr. Byrum we were unable to secure the meeting as it was voted to go to Chicago.

The golf tournament held the day after the close of the meeting was a great success, and great credit is due to Dr. "Jimmy" Eaves who, besides being a successful surgeon and a par golfer, is also a prince of good fellows.

A larger number of members were accompanied by their families this year than usual and many remained to enjoy the delightful climate of the Pacific Coast and all returned praising the profession of California and the officers of the Association for the most successful meeting ever held.

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*Editorial Notes — Personal and General*


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DR. R. F. TERRELL, Stigler, is spending a vacation in Colorado.

DR. W. A. LYNOTT, Bartlesville, is visiting the clinics at Chicago.

DR. J. T. BARB, formerly at Norman, has removed to Roby, Texas.

DR. J. S. HOUSEWORTH, Guthrie, has moved to Hollywood, California.

DR. MARY RAY, Bartlesville, visited Colorado in August and September.

DR. F. B. FITE and family, Muskogee, visited Colorado points in August.

DR. A. L. STOCKS, Muskogee, has returned from a visit to London and Paris.

DR. J. W. ADAMS, Chandler, and family have returned from a summer vacation.

DR. FRED S. CLINTON, Tulsa, has returned from a vacation spent in Colorado.

DR. A. V. EMMERSON, Tulsa, and family are touring in Colorado and the North.

DR. and MRS. A. C. HIRSHFIELD, Oklahoma City, spent their vacation in Colorado.

DR. J. B. HIX, formerly of Altus, Oklahoma, has opened an office in Oklahoma City.

DR. G. E. STANBRO, Pawhuska, has returned from a post graduate course at Chicago.

DR. E. A. ROWLAND, Norman, left for an extended visit with relatives in Mississippi.

DR. C. O. GINGLES, Carmen, has recently located there, having moved from Kentucky.

DR. FRED LOE, Helena, is also a new member, who has recently moved to Oklahoma.

DR. J. L. DAY, Norman, is planning a new two story brick colonial residence, to be built soon.

DR. T. S. WILLIAMS, Stillwell, visited Tennessee and Kentucky points in August and September.

DR. and MRS. TOM LOWERY, Oklahoma City, came home from a two months' trip in Colorado.

DR. A. C. BYARS, at present in California, is returning to make his residence at Wilburton again.

DR. CARL J. PUCKETT, Pryor, has returned from a profitable time attending the clinics at Chicago.

DR. and MRS. J. R. McKIRAHAN, Picher, have returned from a two weeks' vacation spent in Missouri.

DR. and MRS. C. H. McBURNEY, Clinton, have returned from an auto trip to the California coast and Canada.

DR. L. B. FOSTER, Walters, and family returned from a two weeks' auto trip to Colorado Springs and Manitou.

DR. W. E. DIXON, Oklahoma City, is back from a few weeks vacation spent with Mrs. Dixon at Estes Park.

DR. and MRS. A. W. WHITE, Oklahoma City, have returned from a trip to Chicago and the Northern Lakes.

DR. and MRS. H. COULTER TODD, Oklahoma City, have returned from an extended summer trip and vacation in Canada.

DRS. FENTON SANGER and WINNIE M. SANGER, Oklahoma City, returned recently from a motor trip to Colorado.

DR. J. H. PERKINS, Wewoka, and family, returned from a long vacation trip spent by them in Montana, Nebraska and Idaho.

SCHOOL OF MEDICINE, University of Oklahoma. Enrollment for the first year of the School of Medicine is reported closed.

DR. and MRS. W. H. AARON, Pawhuska, returned recently from Kansas City where Dr. Aaron had been for two weeks.

DR. W. M. MARTIN, Fort Worth, Texas, died suddenly of apoplexy August 28 at Enid, while visiting there to deliver lectures.

DR. RICHARD SOUTAR, recently an interne at the University Hospital, Oklahoma City, has been appointed college physician.

DR. J. V. HARDY, Medford, accompanied by Dr. J. R. Swank, Enid, are devoting three weeks to attendance at the Mayo Clinics.

DR. and MRS. G. S. BAXTER, and DR. and MRS. W. C. BRADFORD have returned from a two weeks' vacation trip in Arkansas.

DR. MELVIN FRY, Slick, has sold his practice there and spent a month in the East, preparatory to locating at Wewoka or Holdenville.

DR. G. F. BORDER, Mangum, attended the national meeting last month of the Rock Island Surgeons and Physicians at Kansas City.

DR. and MRS. J. W. ADAMS, Chandler, returned recently from a vacation trip to the East; Dr. Adams attending the clinics in Chicago.

DR. M. W. BUCHANAN, Watonga, has been appointed County Health Officer for Blaine County September 4, vice Dr. W. W. Gill, resigned.

DR. ROSCOE WALKER and family, Pawhuska, returned home after enjoying an extended vacation in Minnesota; Dr. Walker attending the clinics there.

DR. and MRS. H. A. CONGER, Duncan, returned recently from a three months' trip to California, which included an experience with an earthquake.

DR. and MRS. HARRY D. MURDOCK, Tulsa, who have been making an extended motor trip

through Mexico, California and the Northwest, returned home recently.

DR. and MRS. A. M. SHERBURNE, Cordell, have returned from an extended tour of the Northwest and British Columbia, stopping at Frisco to attend the A. M. A. convention.

CENTRALIA, OKLAHOMA is reported to be without a doctor, and claims that the town and community can well support a good physician; the former doctor having practiced there for 25 years.

DR. J. M. PEMBERTON, Okemah, is attending the University Hospital at Oklahoma City, as assistant to Dr. Wallace, professor of Urology, where he will remain for the next two or three months.

DR. GREGORY E. STANBRO, Pawhuska, left recently for Rochester, Minnesota, where he will meet his father, also a physician, where both will attend the clinics. Before returning Dr. Stanbro will also attend the clinics in Chicago.

CAPT. M. Q. HOWARD, M. C., Oklahoma City, refutes the newspaper statement charging that military captives of the Oklahoma National Guard forces held prisoner at Tulsa are being ill-treated in the matter of food. Capt. Howard says the prisoners are receiving "exactly the same food cooked by the same cooks and served in the same place at the same time as the officers." Some succinct statement, we call that.

OKMULGEE WAITRESSES "flew the coop" when it came to facing certain examination required by that city's ordinances. Rather than be weighed in the balances and found wanting they resorted to the simple expedient of moving to Muskogee, Tulsa, Sapulpa and other nearby cities. The suggestion that here is a good field for some executive who really wishes to perform a good service to the people of Oklahoma, will not down. If I were Czar, well.

#### DOCTOR CHARLES B. BARKER

After a two weeks' illness of typhoid, from which it was believed he was recovering, Dr. Charles Barker passed away at the hospital at Guthrie on August 27th. Dr. Barker was born in 1884, and a graduate of the Chicago College of Medicine and Surgery in 1912; he was licensed to practice his profession in Oklahoma in 1913, and has been for a long time a resident of Guthrie, specializing in eye, ear, nose and throat. He was very active in behalf of children, having lately performed over fifty operations for the removal of tonsils upon the school children of Perry, in behalf of the Red Cross. Dr. Barker leaves a wife, who is also a practicing physician of Guthrie.

Dr. Barker was a Fellow of the American Medical Association, the American Academy of Ophthalmology and Oto-Laryngology, and a member of his state and county Medical Society. He was held in high esteem among his fellow physicians at Guthrie, as well as by his friends and neighbors, and his loss will be distinctly felt by the citizens of Guthrie.

#### DOCTOR JAMES MADISON WORKMAN

Died at Woodward, Oklahoma, his home for the past thirty years, Dr. James M. Workman, on August 27, 1923, and for many years a prominent physician of the state. Dr. Workman was several times President of his County Society, and was Councilor for his district. He was an active member of his organization and held in the highest esteem by his neighbors and friends. He held membership in the A. O. W. W. and the K. P. and was for a great many years surgeon for the A. T. & S. F. Railroad. Many physicians from the surrounding country attended the funeral and his County Society attended in a body.

Dr. Workman was born of Pennsylvania ancestry, at Knobnoster, Missouri, on the 27th of January, 1857, where he attended school, graduating from Missouri Medical College in 1879. He practiced his profession for a few years in his home town, later moving to Indian Battleground and to Colorado Springs. He came to Oklahoma in 1893, being licensed on June 7, 1894, where he has since continued to practice. Dr. Workman is survived by his wife, Mrs. Sarah W. Workman, and by two sons and a nephew who is Dr. Ralph Workman.

#### BOOK REVIEWS

BEDSIDE EXAMINATION. A Clinical Guide by Drs. H. Elias Dozent and Assistant at the First Medical Clinic of the University of Vienna; N. Jagic, Extraordinary Professor and Chief Physician to the Sofenspital, Vienna; and A. Luger Dozent and Assistant at the Second Medical Clinic of the University of Vienna. Arranged and translated by Wm. A. Brams, M. D., Adjunct in Medicine, Michael Reese Hospital, etc., Chicago. Cloth, 135 pages. Price \$1.50.

This compact little work is arranged by skilled clinicians with a view of giving the practitioner a handy guide and aid toward the complete examination of his patient. It may be said to be well timed, and if we accept as a fact that we do overlook many features in examination of patients unless we have arranged a system of examination, which permits the overlooking of no salient feature.

CHEMISTRY FOR NURSES. A Text-Book of Chemistry for Nurses by Fredus N. Peters, A. M., Ph. D., Author of Experimental Chemistry; Laboratory Experiment; Applied Chemistry, etc., formerly Professor of Chemistry and Director of Laboratories, Kansas City College of Pharmacy; Professor of Organic Chemistry Hahnemann Medical College, Director of Laboratories and Professor of Chemistry and Metallurgy, Kansas City Dental College; Instructor in Chemistry in Kansas City Central High School for 23 years; more recently vice-principal. Cloth 302 pages. Illustrated. Second Edition, 1923. Price \$2.50. C. V. Mosby Company.

PRINCIPLES OF BACTERIOLOGY. By Arthur A. Eisenberg, A. B., M. D., Director of Lab-

oratories, St. John's Hospital; Pathologist to Lake-wood Hospital; Serologist to St. Ann's Hospital, Cleveland; Director of Laboratories, Mercy Hospital, (Canton, Ohio), Member Society of American Bacteriologists. Second Edition. Cloth. Illustrated, 214 pages. Price \$2.25, 1923. C. V. Mosby Company.

**OBSTETRICS FOR NURSES.** By Charles B. Reed, M. D., Obstetrician to Wesley Memorial Hospital, Chicago. One hundred and forty-four illustrations, including two color plates. Cloth 399 pages. Price \$3.50, 1923. C. V. Mosby Company.

The author of this work says: "It might seem that an apology was necessary for presenting a new textbook on obstetrics for nurses when so many are to be had for the asking. But when a teacher is rarely or never satisfied with his own work it is too much to expect that he will ever fully endorse the product of another." With the idea in mind that possibly something has been left unsaid, the author endeavors to state the nurses problems from his viewpoint, and he has done a good piece of work in the attempt. However, it seems to the writer that inclusion of such specialties as bacteriology, that is, color plates on that matter, is not necessary in a work for the use of nurses. If the subject was one with which nurses ordinarily came in contact, all good and well, but, as a matter of actual experience we know that they rarely, if ever, are called upon to do any sort of bacteriological work, so to that extent the book is redundant material. However, the fine arrangement of the text, the illustrations, etc., otherwise go far to excuse the inclusion of what one may think might be left out.

**GENERAL MEDICINE.** Of the Practical Medicine Series, comprising eight volumes on the year's progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A. M., M. D. Vol. 1, General Medicine, Edited by George H. Weaver, M.D., et al. Series 1923, price not stated, illustrated, pp. 678. Chicago, the Year Book Publishers, 1923.

### **EYE, EAR, NOSE AND THROAT**

Edited by Jas. C. Braswell, M. D.  
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**FACTORS OF SAFETY IN THE OPERATION FOR CATARACT.**—Green, J., J. Missouri State M. Assn., 1923, xx, 83.

The author thinks that the so called extracapsular operation for cataract is incomplete as it leaves a varying amount of lenticular matter. If the cortical matter is of the "sticky" variety, it may give rise to iritis or iridocyclitis, possibly resulting in a closed pupil or glaucoma.

The intracapsular operation of Smith of India is not always successful. A recent questionnaire to the people in St. Louis operated upon by Smith showed that 56 per cent have moderate to good vision, while in 44 per cent the operation failed.

The author thinks that it is necessary to restore the patient to as near normal condition as possible due to the fact that high blood pressure, glycosuria and albuminuria frequently affect the general

condition to such an extent that it is detrimental to the patient undergoing any operative procedure. It is essential to get such people out of bed following a cataract operation as soon as possible. In cases of active syphilis the operation should be avoided.

Preliminary iridectomy performed four to eight weeks previous to the removal of the lens will simplify the extraction, and may hasten the maturation of an unripe lens, and will lessen the danger of postoperative iritis.

Squeezing is best avoided by using a speculum instead of lid retractors, by injecting one per cent of novocaine under the conjunctiva ten minutes before the incision, by giving a sedative enema one hour before the operation, and by avoiding nervousness or haste in the presence of the patient. Irrigation of the anterior chamber to wash out remnants of the cortex is indicated except in the case of a known fluid vitreous or the presentation of vitreous.

A binocular bandage re-enforced by a mask should be left in place for seventy-two hours. At the time of first inspection a one per cent atropine and five per cent protargol solution should be instilled in the eye. On the fifth day the unoperated eye may be left uncovered, and on the tenth day the patient may be discharged from the hospital.

**THE PRESENTATION OF A THEORY EXPLAINING A PHASE OF TINNITUS AURIUM.**—Oliver A. Lathrop, *Laryngoscope*, 1923, xxxiii, 582.

Tinnitus aurium is a very common subjective symptom of abnormal sound perception in patients suffering from aural disturbances. It may be caused as the result of irritation such as cerumen, insects and foreign substances. Infection and prolonged stimulation of the labyrinthine cells are other common causes.

In a large group of cases there is a slight to a marked loss of hearing associated with tinnitus without any known cause or pathological defect in the ear to account for the complaint. The theory of this condition is explained as follows:

Normally the air pressure in the external auditory canal and in the middle ear is the same. The drum membrane, the articulation of the ossicles, the membranous attachment of the foot of the stapes in the oval window and the membrane filling the round window are freely movable and respond to the slightest vibration. The tensor tympani and stapedius muscles keep this ossicular chain in perfect equilibrium. Under these conditions there will be no stimulation reaching the labyrinth except from vibrations acting on the drum membrane.

When, however, pathological conditions supervene and cause a displacement of the tympanic membrane, ossicles and ligaments, or any adhesions form involving the sound conducting apparatus, an abnormal position of the tensor tympani and stapedius muscle must result and the normal balance is destroyed and an abnormal pressure is brought to bear on the intra-labyrinthine fluid. Any pressure on the labyrinthine fluid will produce the sensation of sound same as pressure on the vitreous humor of the eye will produce an abnormal sensation of light, but in the labyrinth a constant pressure cannot be maintained because some of the fluid can escape through the aqueductus vestibuli and restore the normal pressure; therefore, other reasons must be found to explain

a continued stimulation. Stimulation may persist as the result of adhesions about the foot plate of the stapes.

#### THE WARING SUCTION TONSILLECTOMY.— J. B. H. WARING, *Laryngoscope*, xxxiii, 1923, 587.

The author briefly reviews several methods used in the removal of tonsils and describes in detail the Waring Suction Tonsillectomy. This method can be used in local as well as general work. The author claims that the method is safe, simple and an expert can do better, cleaner and more rapid enucleations by this method.

The technique is as follows: A glass suction tube modified after the Hurd glass suction tube and now called the Waring tonsil suction tube is placed over the tonsil between the pillars. Suction is turned on and the tonsil is drawn out of its bed by suction. A snare, preferably the Beck-Pierce model is passed over the suction tip and behind the tonsil and the tonsil is slowly or rapidly enucleated.

The author claims that this method is applicable to all types of tonsils but will demonstrate its superiority in small children, where the field of operation is constricted and especially on the small, deeply buried or badly adherent tonsils.

#### THE END-RESULTS OF RADICAL OPERATIONS ON THE ACCESSORY SINUSES.—Ann. Otol., Rhinol. & Laryngol., Skillern, R. H., 1923, xxxii, 139.

The sequelae of radical operations on the frontal sinus may be: (1) Persistence of pain; (2) hemianaesthesia of the brow and scalp; (3) persistence of discharge; (4) neuralgia about the cicatrix; (5) diplopia; or epiphora.

Radical operations on the maxillary sinus are seldom followed by unpleasant after effects if the operator is thoroughly familiar with the anatomy of the sinus. After effects such as anaesthesia of the upper lip, permanent fistula in the mouth and excessive dryness of the nose on the affected side may follow an operation of the maxillary sinus.

Radical operations on the ethmoid labyrinth may be followed by the continuance of the discharge and pain; partial occlusion of the nostril; or ocular symptoms which were not present previous to the operation.

The author thinks that in cases of disease of the ethmoid labyrinth that it is best not to try to affect a cure in one operation, and that the middle turbinate should be removed in a preliminary operation to allow better aeration and drainage and a more careful study of the labyrinth. Experience teaches that radical operations upon the accessory sinuses does not always mean radical cures.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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#### I. SPINAL AFFECTIONS.

**NON-SPINAL PSOAS ABSCESS.**—Wm. Baer, Geo. Bennett, Wm. Nachlas. *The Journal of Bone and Joint Surgery*, July 1923.

The object of this article is to point out that all psoas abscesses are not necessarily of spinal origin.

The etiology may be due to a suppurative myositis of the posterior abdominal wall, as the result of a metastatic infection or infected hematoma following trauma. Infection of the solid viscera can likewise be responsible. It followed infection of the internal genitalia after operation in one of their cases. Lymphadenitis may occur in this region the same as in the cervical region.

The condition must be differentiated from arthritis of the hip, arthritis of the sacro-iliac joint and spine, Pott's disease, trauma of the spine, tuberculosis of the hip, femoral hernia, tumor of the thigh, broad-ligament abscess, pelvic inflammatory disease, and sciatic neuritis.

The symptoms are: Leg draws up and limps. If history of injury there is a latent period with later gradual onset of symptoms of discomfort in the lower spine. There is flexion deformity of the hip joint, limitation of hyper-extension, but freedom of abduction, rotation, and further flexion. The tumor may be found in the groin if of sufficient size. X-ray is negative for bone lesion but may show outline of the abscess or a haziness of the hip or sacro-iliac joints.

Treatment: Aspiration or evacuation of the abscess is indicated, an incision is made over the crest of the ilium, from the anterior superior spine backward a distance of 8 cms. Incision is carried through the external and internal oblique muscles to the peritoneum, which is stripped forward to expose the psoas muscle.

#### 2. KNEE JOINT AFFECTIONS.

**CYSTS OF THE EXTERNAL SEMILUNAR CARTILAGE OF THE KNEE.**—D. B. Phemister, *Jour. A. M. A.*, March 3, 1923.

He reports two cases giving pathologic examination in each case. He believes that the pathological findings in these cases are identical with those of colloidal cystic swellings which develop in various connective tissues, such as come on the back of the wrist, and are commonly called ganglions. Most of the cases occur in young adults and more in males than females. Trauma plays a slight role in these cases. The lesion has never been observed in the internal semilunar cartilage.

Treatment consists in operative removal of both cyst and external semilunar cartilage. When only the cyst is removed there is usually a return of symptoms and a secondary operation is necessary.

#### 3. FRACTURES.

**OSTEOPATHYROSIS: Report of a Case with Roentgenograms of Eleven Different Fractures in the same patient.**—Donald Glover, *Archives of Surgery*, Nov. 1922.

The value of this article is the series of X-ray reproductions. They give a graphic history of the patient from the time he was nine months old until his death seven and one-half years. He points out that over 200 cases of this condition have been collected by various authors. It is also called fragilitas ossium, and osteogenesis imperfecta.

The etiology, pathology, symptomatology, prognosis, diagnosis and treatment are discussed but need not be abstracted here.

## TUBERCULOSIS

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### TUBERCULOSIS IN CHILDHOOD

A routine Piquet test would seem to indicate that practically all children in large cities are infected by the tubercle bacillus. Comby's figures on the rate at which tuberculosis occurs in children under two years, and Hoffer's figures on children up to fourteen years, seem to bear out this theory.

While indirect infection by articles contaminated with tuberculous sputum is possible, the greatest danger is in direct contact, especially with a tuberculous mother. The use of unpasteurized milk is the main source of the cases of the bovine type.

It is thought that the incubation period is about 30 days, that the progress of the disease depends, to a large extent, upon the age of the child and the size of the dose received, and that small divided doses may have an immunizing effect.

From these points childhood would seem to be the strategic point of attack in the prevention of tuberculosis. Every effort must be made to remove infants from contact with open cases. Economic conditions, sentiment and prejudice make this very difficult, but society must provide the means for so doing. This will mean both the provision of institutions for the children removed from their homes, and the funds for the support of families from which the wage earner must be removed.—*The Nation's Health*, July 15, 1923.

### THE DREYER TUBERCULOSIS VACCINE

The experiments of Professor Dyer of the department of pathology in Oxford University with the "defatted" tuberculosis vaccine has excited much interest.

He considers it quite possible that the coating of fatty material known to cover the tubercle bacillus, protects the specific bacterial proteins and prevents their liberation, thus stopping the production of the stimulus of the immunity reaction of the injected body.

The exact method of attempting the removal of the lipoidal elements from the various acid-fat and gram negative bacteria is described in full in the complete article appearing in the *British Journal of experimental pathology* for June 1923. There is also an extensive abstract in the *British Medical Journal* for June.

The available experimental evidence indicates that the injection of this antigen produces anti-substances in the serum which are demonstrable by test tube experiments. It is the opinion of Drs. Paul Fields and G. T. Western, after observation of 60 patients treated in the London Hospital with the new antigen, that improvement has taken place in nearly all cases, and is in their opinion, of the order which exceeds obviously that obtainable by any other form of treatment which is applicable to these conditions.

While this work is in the experimental stage at present, the experiments are scientific and have good theoretical basis. Future developments will be observed with great interest.—*Editorial in the Journal A. M. A.*, July 14, 1923.

**PLEUROPULMONARY REFLEX:** Its Etiology, Prevention and Treatment. B. P. Trickman, *Am. J. M. S.*, June 1923.

The pleuropulmonary reflex is perhaps the most important accident following thoracentesis. This symptom-complex described by Rogers in 1864 is characterized by cardio-respiratory failure, tonic and clinic contractions of the muscles and loss of consciousness.

Among the explanations offered for the cause of this accident are; that it is a coincidence, that it may be due to gas embolism, to lymphatism, to the use of gas below the body temperature, or to imperfect anesthetization. Strickman says these views are erroneous as the accident recurs with succeeding punctures; necropsis fail to reveal status lymphatism, the reflex occurs most frequently when inflation is not attempted and just as often when the needle track is carefully anesthetized.

In 162 punctures for initial pneumo-thorax which Strickman reviews, the reflex occurs ten times. In contrast to this series of cases the reflex occurred only twice in 1824 punctures for "gas refills." This analysis shows that in three-fourths of the cases, the visceral pleura and lung had been injured by the needle, and that an acute pathological process was present in the injured area. The reflex practically never occurs when, as in gas refill cases, the pleural surfaces are widely separated.

It is reasonable to believe that an injury to the visceral pleura is frequently the cause of this accident. It seems, therefore, that fewer punctures should be made without definite indications.

### A STUDY OF THIRTY-FOUR CASES OF ABSCESS OF THE LUNG

The recent literature on lung abscess reveals two very important facts. (1) the increasing recognition of the importance of tonsilectomy as a causative factor in the production of lung abscess, and (2) the apparently marked increase in the general incidence of the condition. Tonsilectomy seems most likely to be followed by lung abscess when it is performed under general anesthesia.

The apparently marked increase in the incidence of pulmonary abscess cannot be explained entirely by the relationship to tonsilectomy. It is probably also due in part to the fact that many more cases are recognized now than formerly. The x-ray is largely responsible for this increased recognition. Far too many cases of chronic pulmonary abscess are still confused with pulmonary tuberculosis. It is common experience to see patients with chronic lung abscess, or bronchiectasis, who have been treated for tuberculosis. A chronic, productive cough with recurring pulmonary hemorrhages is too often considered to be of a tuberculous origin when it may be an expression of a chronic, suppurative process in the lung.

Roentgen-ray findings are stressed in the discussion of diagnosis. Under treatment the authors discuss medical, postural drainage, bronchoscopy, pneumothorax, thoracotomy and lobectomy. The author sets down the following conclusions:

Abscess of the lung is being recognized more today than heretofore. The large number of tonsilectomies done may help to account for the apparently increased number of abscesses. Early recognition and operation before the abscess has become chronic, frequently prevents failure of treatment, although many patients will recover with non-surgical treatment. Careful history taking, physical signs, use of the roentgen-ray and

diagnostic pneumothorax, make early recognition possible. Patients who do not recover in two or three months need surgical treatment.—Singer and Graham, *Jour. American Medical Assn.*, July 21, 1923.

### RESPIRATORY CHANGES AT HIGH ALTITUDES

With the progress in ballooning and aviation, the necessity of a better understanding of the physiologic changes which take place in high altitudes soon become apparent. The shortage of oxygen with the feeling of barometric pressure has long been recognized as a significant factor. This shortage is promptly met by an increase in the oxygen carrying capacity of the blood; the increase in the number of red blood cells and certain alterations in the circulation. Respiration is also modified.

Professor Schneider of the School of Aviation Medicine, at Mitchell Field, Long Island, has recently reported his numerous observations on men both at rest and at work during a period of acclimatization on Pikes Peak at an altitude of 14,110 feet. These studies showed a higher rate of metabolism under physical exertion than the normal for low altitudes during the first few days. There were individual differences in the amount of increase, and in the time that the heightened metabolism persisted.

The results thus indicate that during the first part of a sojourn at a high altitude, physical exertion may be more costly to the body than at a low altitude, or that it will be later on at the high altitude. As acclimatization occurs, the gaseous metabolism, which is an expression of the exchange of energy, usually returns to, or almost to, the low altitude level. In some individuals this return is made more slowly than in others, usually from one to three days at the altitude of Pikes Peak.

The conclusion that there is no profound change in the gaseous metabolism at the high altitude is supported by the fact that the respiratory quotient is not definitely altered by residence there. It is claimed by some physiologists of note that mountain sickness is due to an undue proportion of alkaline in the blood, and that the vomiting is stimulated by the lack of acid in the circulating medium.

Schneider's experience, on the other hand, leads to the conclusion that some men are more tolerant of low oxygen than are others, and that mountain sickness is more closely associated with oxygen want than with an alkalosis of the blood. Mountain sickness was most severe in the physically unfit, and most often associated with low alveolar oxygen content.—*Editorial Journal of A. M. A.*, July 21, 1923.

### GENERAL MEDICINE

Edited by Wann Langston, M. D.

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### INSULIN AND DIET IN THE TREATMENT OF DIABETES.—Seale Harris, M. D. *International Clinics* 11. 33rd Series.

The unit of Insulin increases carbohydrate tolerance of an average by two or three grams; so with its use a diabetic can consume enough food to nourish him properly without fear of acidosis. Therefore, the dietetic management of the diabetic

is essential to the intelligent use of Insulin.

The use of Insulin is followed by a feeling of well-being, so that it probably has a stimulating effect on the nervous system.

While the author feels that it is too clear to predict the curative effects of Insulin, he thinks "there are cases of transient functional pancreatic disturbance and even organic disease of the pancreas with temporary hyposecretion, in which Insulin may tide the patient over until the blood-sugar-controlling hormones are being secreted again when it may be left off."

"With Insulin diabetic coma can not only be prevented, it can be relieved, provided the patient has not been in acidosis too long."

Indications: The author quotes Stengel:

1. The coma cases;
2. The severe cases, with tendency to acidosis;
3. The severe or mild cases that have dropped low in weight and are in a state of debility;
4. Cases requiring operations;

To which the author adds (a) the tuberculous diabetic and (b) the acute infections in diabetics.

The author begins with doses of one to five units twice a day subcutaneously with patient on basal diet, carefully estimating blood and urine sugar and increasing or decreasing dose until patient is getting 500 calories above basal diet. In cases of coma an initial dose of 30 units is given and, if necessary, this dose may be repeated every hour if ten grams of glucose be given intravenously at the same time.

Basal diet is figured approximately by multiplying patient's weight in kilos by twenty-five. The amount of protein in grams is taken as two-thirds body weight in kilos; and the ratio of carbohydrates to fats as one to three. In children add ten to twenty percent to the number of calories and make protein in grams three-fourths of body weight in kilos; after fifty years the number of calories is reduced by ten percent.

In very severe cases it is very important to watch the patient's urine for acetone and if there are indications of acidosis the carbohydrates should be increased and fats decreased.

The author recommends hospitalization for diabetics until the tolerance can be determined during which time the patients should be educated as to weighing and measuring their food, examination of the urine, etc. "The diabetic should be regarded by the physician as a pupil, who if he would live and be happy and efficient must learn the practical facts in scientific dieting, and he should not 'graduate' such a patient until he has a working knowledge of his dietetic needs."

**INSULIN IN HOSPITAL AND HOME.**—Elliott P. Joslin, Horace Gray and Howard F. Root. *Journal of Metabolic Research*—Vol. 11. Nos. 5-6, Nov.-Dec. 1922. Pages 651-699.

The authors summarize their experiences in the following conclusions:

1. The number of patients treated with insulin has been 83. In large measure these were chosen from the severer surviving diabetics cared for by us since 1898. One patient of this number after discharge from the hospital omitted insulin some weeks later in his home while upon an increased diet. He re-entered the hospital in coma and died in seven and one-half hours. There were no other deaths which could be attributed to insulin and no other deaths from coma occurred in hospital among the 204 patients admitted for diabetes during this period of insulin administration.

2. The average number of units of insulin given to 53 of the patients for an average period of 63 days was 712, or 11 units a day.

3. The blood sugar at the beginning of treatment averaged 0.24 per cent. and at the end of treatment 0.19 per cent. These figures represent the blood sugar taken fasting.

4. The weight of one of the patients was 50 per cent. below normal standard weight, and the average weight of 53 of the patients was 29 per cent. below standard weight.

5. The greatest gain in weight was 9.7 kilograms, and the average gain 2.6 kilograms. The greatest percentage gain in weight was 25 per cent., and the average 7.6 per cent.

6. The total calories given the patients rose from 26 to 38 calories per kilogram body weight. The carbohydrate rose from 37 grams to 45 grams, the protein from 36 grams, or 1 gram per kilogram body weight, to 55 grams, or 1.4 grams per kilogram body weight, and the fat from 62 grams to 105 grams. The ketogenic antiketogenic ratio changed from 1.1 to 1.2.

7. Patients at all ages from two years to 77 years responded equally well to treatment, but the youngest cases show the greatest gain in weight. The average number of days for the gain of one pound in weight for the different decades of life varied from 7 to 15 days quite irrespective of sequence of decades.

8. Cases of short and long duration also responded equally well to treatment. The average number of days for the gain of one pound in weight, according to the years of duration varied from 8 to 19 days, and was also irrespective of the years of duration of the disease.

9. The greatest number of units given anyone in 24 hours was 100. There were but three cases who regularly received over 30 units.

10. There is no evidence at present that the dosage must be increased if we disregard the increase at the beginning of treatment, which corresponds to the constantly increasing diet, and also take cognizance of the undernutrition of the patients.

11. A total of 30 reactions have occurred in 11 of the 83 patients during the administration of 5153 doses of insulin. A reaction developed following the injection of one unit of insulin with a man who had a tolerance for 114 grams of carbohydrate but was weakened by diarrhea. During the reactions the blood sugar at no time fell below 0.03 per cent. All reactions occurred between a quarter of an hour and three and three-quarters hours following injection of insulin.

12. The importance of diarrhea in rendering patients liable to hypoglycemic reactions is suggested.

13. The basal metabolism increased 9 per cent. in a series of 11 patients. In one case it rose from 43 per cent. to 22 per cent. during the course of treatment and in another from 24 per cent. to 5 per cent.

The respiratory quotient rose with food after insulin to above unity.

14. General infections were uninfluenced by insulin, save that complicating acidosis was lowered. Local infections appeared to heal more rapidly.

15. The omission of insulin resulted in the re-appearance of glycosuria which did not reach its height until the fifth and last day of omission of the drug.

16. The administration of insulin by the mouth in two cases was without effect.

17. A diabetic with relatively high tolerance for carbohydrate, but not for calories, through insulin increased his caloric tolerance but not his carbohydrate tolerance.

18. Patients treated in the hospital with insulin continued successfully the treatment at home, due to additional training in diet as well as in insulin medication.

19. Information for diabetic patients receiving insulin is recorded.

20. The use of insulin involves grave responsibility for physicians. Painstaking education of the patients and close observation at frequent intervals will protect both patient and doctor.

They gave the following "Information for Diabetic Patients Receiving Insulin."

1. Learn qualitative Benedict's test. Secure apparatus for same.

2. Secure food scales and understand their use.

3. Learn to summarize the diet at each meal in figures of carbohydrate, protein and fat.

4. All patients should remain in bed ten consecutive hours out of the twenty-four.

5. Insulin is prepared in solutions of different strengths. Know your dose in units (not in cubic centimeters) and how to measure the amount of solution to give that number of units.

6. Syringe and needle must be boiled each time before using. Cleansing of the skin and top of the bottle with alcohol is also necessary. Immediately after removing the needle, cleanse it and the syringe with cold water.

7. An insulin reaction may occur 1-2 hour after an injection and may be recognized by the sudden onset of severe hunger, weakness, sweating, trembling, or pallor. The first dose of a new preparation should always be half the last dose of an old.

8. At present it is not prudent to use insulin without daily examinations of the urine.

9. A reaction should be treated by eating an orange or taking the carbohydrate portion of the next meal.

10. If your usual exercise is not obtained, on that day reduce your diet.

11. Arrange for a supply of insulin for two weeks in advance.

12. If your supply of insulin fails

A. Notify your doctor by telephone or telegraph, and

B. Reduce the diet one-third.

13. Whenever reporting to your physician or hospital

(1) Submit in writing:

A. Weight dressed.....or naked.....

B. Record of urine tests

C. Diet C....., P....., F....., Cals.....

D. Record of insulin used, preparation number, dose, and time given and

(2) Bring part of mixed twenty-four hour quantity or urine with record of the amount.

## GENERAL SURGERY

Edited by G. A. Wall, M. D., F. A. C. S.  
303Palace Bldg., Tulsa

## OLD MASTERS

Galen, (131-201 B. C.) was born nearly 500 years after the death of Hippocrates. Surgical science could show no stupendous changes during these years. Plato and Aristotle followed Hippocrates, but while Plato was without scientific method, Aristotle taught the value of anatomy. Galen was a strong outspoken character, always uncompromising and made many enemies. While Hippocrates confined himself to bedside informa-

tion, Galen went farther and practiced and taught laboratory methods through animal experimentation: he was truly our first great physiologist, and he appreciated as did those other ancients that physiology is physiology, that diagnosis is diagnosis and therapeutics therapeutics, with surgery a branch of therapeutics.

His most famous discovery is that of the function of the arteries: He demonstrated by double ligature of an artery on a living animal and subsequent section, that the artery is distended by blood: He noted the difference between arterial and venous blood, and felt that the lungs played an important part in the entrance of some vital element into the arterial system.

He observes 15 centuries before Harvey, what he (Harvey) did not discover, that there is a terminal communication between the veins and arteries. He described the movements of the heart, the foramen ovale and the ductus arteriosus, and described them as belonging to a foetal condition. He practiced the ligation of arteries, describes aneurisms, true and false and recommends compression for their cure.

He regarded the brain as the central organ and the spinal cord an offshoot: recognized that the nerves are structures designed to convey impressions of sensation and motion. He taught that the muscle is the instrument of voluntary motion, from whence the principle of this motion originates, and by what path it travels. He said it came from the brain through the nerves. He advocated operation for injuries of the brain and cord and used the trephine sparingly, preferring gouge and chisel. He recognized injuries to the cord with compression and advocated operation for relief.

#### FRACTURES OF THE NECK OF THE FEMUR.— Eve, Duncan, Sr. Jour. S. Med. Assn. Vol. xvi, No. 8, P. 606.

The author using Stoke's classification of intra- and extracapsular fracture states that even in the intracapsular, the line or lines of fracture extend outside the capsule, making differentiation quite difficult, but of little concern, except in prognosis, for the modern treatment is the same, except in a limited number of cases.

In treating a feeble old person it is best to make no attempt to obtain union, but use supportive measures and place the patient in a comfortable bed for ten days or two weeks with a Buck's extension, to prevent muscular contractions and a sandbag to prevent eversion. A small pillow under the flexed knee will be of advantage. He advises the use of only five to seven pounds for extension. He advises getting the patient out of bed when pain and spasm are relieved, even to permitting the use of crutches.

Should hypostatic congestion of the lungs occur, or signs of great exhaustion appear or diarrhea occur, get the patient out in the air and sunshine. He advises that treatment of these cases be undertaken when possible. The bed should be even and rather hard laying stress upon the employment of a fracture bed and Balkin frame, which permits more comfort for the patient. Good surgeons are not agreed on the best method of treatment, but fixation and traction are essential: Extension should be gentle and he thinks that this can be accomplished with a Thomas splint; Blake's splint, Jones' frame and others. He uses the Brown modification of the Hodgen splint, with the limb in Whitman's abducted position in the old patients. In a young person with impaction he pulls it apart by forcible abduction then uses

a plaster cast with the limb in full abduction to insure guaranteed immobilization. The author thinks Whitman's plan in these cases ideal and applicable to both intra- and extracapsular fractures of the neck of the femur.

He quotes Pirtle, who sums up the advantages of Whitman's method, as follows: (1) there is little shortening, (2) little or no pain and (3) good function is secured. In old people he does not pull apart the impaction. Operative treatment of fractures of the femoral neck the author thinks is not very popular and should be used only in young and middle aged people, in whom retention in correction position seems impossible.

If open operation has been decided upon make a fluoroscopic examination to determine that the manipulation has brought the fragments into apposition, then through a small incision over the great trochanter drive an 8 or 10 penny silver nail through the trochanter and neck into the head. Apply a plaster cast with a trapdoor over the incision.

In ununited fracture he advised autogenous bone grafts if the patient is physically able to stand the operation but the operation should never be done on an old person.

#### USE OF THE LANE BONEPLATE.—Ralls, A. W. South. Med. Journal, May 1923. P. 375.

The author does not question the merit of other types of internal fixation, of fractures of the long bones, nor does he wish to make any extravagant claims for the Lane plate in simple and easy cases, neither does he advocate indiscriminate and careless operative interference. He has often plated with good results, where an autogenous graft was not practicable, and he thinks disappointing results are often had in the use of the plate, because the technic is not properly adhered to, and he says that many operators are capable of applying a bone plate, who have not the training to do an inlay: the bone plate can serve a greater number of operators and patients than any other method of internal fixation. In point of real service it eclipses all other methods in his opinion.

He gives a report of a number of cases of arm fracture in and about the elbow treated with the plate and the results obtained. In 32 cases of fracture of the condyles he got no deformity, no paresis and no infection, with a perfect functional result: He had few infections and only one case of nonunion in 12 cases of long bone fracture. He quotes Rutherford Morrison as follows: "In the humerus and femur I do not believe any method of fixation can equal the metal plate, if the bone is firm enough to hold the screws. Lane plate fixation can be successful where other methods have failed."

The author recommends the removal of every plate as soon as it has performed its function and warns against it where the soft parts are much contused. For rest of the limb he uses a Thomas leg or arm splint.

#### FRACTURES OF THE PELVIS.—Bejul, A. P. Surg. Gyn. and Obstet., Aug. 1923. P. 168. Abstracted by Schaack.

Generally speaking fractures of the pelvis have received little attention, clinical observations are insufficient, and studies on the cadaver have not explained their mechanism. Statistics vary greatly. They vary from 0.31 of all to fractures accord-

ing to Gurlt and others estimate their incidence as high as 2.93 percent.

They are caused not alone by direct heavy trauma but muscle traction plays a part according to the author of the paper. The case of a woman 36 years old is reported, in which the X-ray showed a fracture of the horizontal ramus of the pubis and a fracture of the ascending ramus of the ischium with splintering and dislocation of the ilium, treated by extension with a 12 pound weight on the right leg, and a five pound one on the left leg. Measurements of the pelvis 14 days after showed a decrease in the dislocation. The patient recovered and was able to walk after three months.\*

The author considers extensive a very efficient method of treating a fractured pelvis. Periodical measuring and X-ray examinations are important. Massage and exercise may be begun in the first weeks. Bed rest for 8 or 10 weeks is necessary. The prognosis is poor. In the 97 cases collected from literature the mortality was 33 per cent.

#### TUMORS OF THE BREAST—INNOCENT AND MALIGNANT.—Primrose, Alex., C. M. Edin. *Annals Surg.*, June 1923. P. 668.

This author presents 448 cases of breast tumors for investigation urging the necessity of recognizing malignancy early. He states that attempts of late years, in improved technic, more radical operation and more skillful use of the X-ray and radium, compels us to admit that there are no means of eradicating breast cancer, once there has been metastases to the adjoining lymphnodes.

The radical measures cannot compete in effectiveness with the early diagnosis and immediate removal by radical operation. In the past decade the greatest progress which has been made, is found in the better education of the public and the profession regarding cancer. Formerly it was common to find doctors waiting for certain signs of malignancy, before advising surgical intervention. In doubtful cases there should be no fatal temporizing, but the diagnosis should be cleared up by the surgeon and the pathologist. We have come to realize that cancer in its early manifestations is a curable disease. He commends the American Society for the Control of Cancer for accomplishing excellent results. The paper contains several long tables and case reports of malignant and benign tumors, giving age, incidence, etc.; too long to be used here. It should be read in its original as it is a valuable contribution to this subject. He holds the view that at the present time removal by operation holds out the best prospect for a cure, and thinks that most surgeons feel that x-ray and radium should be utilized only as adjuncts to surgery. All tumors removed from the breast should be examined carefully by the microscope and failure to do this deserves severe condemnation and reflects no credit on the guilty doctor.

Attempts have been made in recent years to judge end results by fixing an arbitrary number of years of life after operation, as indicating a cure: The information is of value but not conclusive, since even in extensive diseases the patient will sometimes long survive radical operation. He quotes Handley as demonstrating the continuous extension of cancer cells along lymphatic channels, to the glands of the axilla, intra- and supra-clavicular groups to the pleura and lungs and to the opposite breast. He regards palpable glands in the axilla as a suggestive sign of carcinoma, still, they are by no means pathognomonic of

malignancy, but when a diagnosis of malignancy has been made, we must assume the involvement of the glands **EVEN THOUGH THERE IS NO GROSS MANIFESTATION PRESENT.** (Capitals are mine—Ed.) The dissemination of cancer during our operative procedure is a danger to be guarded against in our technic, and is a real danger in manipulations of the cancerous breast prior to operation in preparing the patient. Bone metastases in cancer much more common than was formerly believed. Schmurl found that of all cases of cancer coming to autopsy no less than 34 per cent showed metastasis in bone.

#### ACTINOMYCOSIS OF THE KIDNEY.—Bevan, A. D. *Surgical Clinics*, Aug. 1923. P. 899.

This article will not be abstracted except to give his treatment of the condition which he says he has been using since 1905. In that year he began the use of copper sulphate, in an intractable case of abdominal actinomycosis, using it both locally and internally, with a resultant cure, and he has been using the same agent in combination with potassium iodid and x-ray since that date. He uses the copper sulphate to irrigate the fistulous tracts, using a two per cent solution, and gives copper sulphate internally, one-fourth grains in capsules three times a day. In addition he gives moderate doses of potassium iodid, not enough to upset the stomach or interfere with the general nutrition of the patient, limiting the dosage from 15 to 30 grains three times a day; in other words, in actinomycosis we use a mixed treatment of copper and potassium iodid, just as we use in cases of syphilis a mixed treatment of mercury and potassium iodid. In addition he has been employing x-ray in these cases, and he is very confident that this combination of copper, potassium iodid, and x-ray has given him very much better results than any other method that he has employed in ray fungus disease.

#### CURRENT COMMENT

By The Editor,  
Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, whatever or wherever it may be. Contributions are invited from our members.

GOVERNOR WALTON, the man elected on a platform promising to give everybody and everything a "new deal," seems to be fulfilling the platform promises in spots only. Military rule, with and without apparent justification seems to be a part of his program of "newness." His especial bete noire seems to be the city of Tulsa, his ambition, that of humiliating a busy city of a hundred thousand of Oklahoma's busiest souls. In his haste to bring this about a strange situation was unearthed. For alleged crimes committed in Wagoner County, adjacent to Tulsa county, he promptly declared, first a modified form of martial law in Tulsa County then when Tulsa seemed to regard the entire thing as a matter of no moment, one not of their concern, for they, as a whole, were aware of no wrong they had committed, he overstepped the bounds of what all lawyers say is constitutional authority, and suspended the writ of habeas corpus; ordered the courts to function, if they were to function at all, under direction of the military authorities, and so the situation stands at this writing. A few confessed "mob-

bers," were promptly sentenced the minimum, two years in the penitentiary, then came the discovery that they were confessing in Tulsa county to crimes committed in another county. Wagoner county promptly intervened, they were haled before the courts of that county, where after making bond, they were tendered a banquet by Wagoner citizens, at which time and place, it is said the Governor came in for no small amount of criticism. Just how, and by what process of legal reasoning the Governor assumed such unheard of authority in Oklahoma, is of the greatest moment and subject to the severest scrutiny. The Oklahoma Bill of Rights (Section 14) clearly reads as follows: "The military shall be held in strict subordination to the civil authorities." A decision of the supreme court reads in part as follows: "The courts of this state having jurisdiction may, at the instance of any person who has been aggrieved or on behalf of the state, inquire into the acts of soldiers or officers of the militia and determine whether they have been guilty of any conduct that would subject them to liability or punishment." This seems to read very clearly and show that it was the intent of our makers of basic law to always hold the military as subservient to the civil authorities. Possibly the sage of Oklahoma City has discovered some round-about way to circumvent the law. Certainly no riot or insurrection prevails in the city of Tulsa or anywhere else in Tulsa county. Commission of crimes in a neighboring county certainly does not call for penalization of people having nothing to do with the matter.

KEEPING THE NEGRO South of "Mason's and Dixon's Line" seems to be becoming more difficult day by day. That he is migrating northward, westward, in any direction which will take him from the state of virtual peonage in which he exists and has had to exist for years, goes without saying, also, that the state of affairs induced by his migration has become one of alarm to all thinkers and economists of the situation, is admitted on every hand. The measures to check his hegira are as numerous as they are silly. In one or two instances political subdivisions have enacted senseless "Laws," imposing upon labor agents unheard of penalties; \$5,000.00 in one instance is the license fee labor seekers are required to pay. Well, such measures are as silly as they can well be. No court would uphold them for a moment, and if they did, it would only hurry the rapid depletion of the Southland of its greatly needed, in fact absolutely needed, unskilled labor. One phase of it, however, has seemingly been overlooked by everyone. That is the fact that nowhere, so far as the writer is aware will black and white, whether skilled or not, labor work in peace side by side. Just as soon as the black man becomes of importance as a laborer, just as soon as he becomes a matter of pressure and competition to his white fellow-worker, at that very juncture he places his life and peace in jeopardy. This is well borne out by recalling the race riots in the coal mines of Illinois many years ago, years before the "Force Bill" was proposed in Congress as a remedy. The rapidly increasing clashes in the northern cities between whites and blacks are not, as is popularly thought, due to isolated cases of personal outrage, but they are due most surely to slowly increasing hatred and distrust between the races. This leaves the black man in an exceedingly unfortunate position. In the South he is the victim, often without semblance of cause or right, to the attacks of the Ku Klux Klan and similar organizations. In the North he is con-

fronted by lines of hostile faces whose hostility originates over economic competition.

According to editorial comment in THE NATION, Secretary of State Charles E. Hughes emits buncombe and bumptiousness when he talks as a politician; but is credited with equal facility for speaking common sense when he orates as a lawyer, as is evidenced by his speech before the Canadian Bar Association at Montreal:

"There is no path to peace except as the will of peoples may open it. The way to peace is through agreement, not through force. The question then is not of any ambitious general scheme to prevent war, but simply of the constant effort, which is the highest task of statesmanship in relation to every possible cause of strife, to diminish among peoples the disposition to resort to force and to find a just and reasonable basis for accord. It is most desirable that all discussions of international relations should not revolve about questions of policy and expediency, however important these may be, but that along with this necessary discussion there should be the determination to reestablish the law, to quicken the sense of the obligation of states under the law."

#### THE PROPER LICENSE

Fayetteville, Ark., June 9, 1923

To the Editor: (Bull. A. M. A.)

The following will explain a special license which has been issued to one L. G. McElhaney, Camp, Ark.

Over the protest of the organized medical profession, the 1923 legislature reenacted a clause in the old Medical Practice Act of 1903 which provided for re-registration of licentiates of the county boards with the newly organized state medical board. This man, McElhaney had been licensed by the Carrol County Medical Board prior to 1903. He has no qualifications, whatever, for the practice of medicine and stated in his application that he had never attended a medical school.

Under Act No. 244 of the legislature of 1923, we were compelled to issue a license to him. However, the act did not specify the kind of license to be issued and in order to evade any complications that might arise with the various states with which we have reciprocal relations, a special non-reciprocal license was issued, a copy of which is herewith attached.

J. W. WALKER, M. D., Secretary.

State Medical Board of the Arkansas Med. Society.

The wording of the special license is as follows:

No. 1, Special

State Medical Board of the  
Arkansas Medical Society.

Whereas, L. G. McElhaney, is not possessed of the qualifications necessary to enable him to successfully pass the examination required for admission to the practice of medicine and surgery in the State of Arkansas, and

Whereas, the General Assembly of the State of Arkansas, recognizing such inability, did by Act No. 244, approved on the 8th day of Feb., 1923, authorize and specifically direct that said L. G. McElhaney be licensed to practice medicine and surgery;

Now, therefore, the undersigned, being the State Medical Board of the Arkansas Medical Society, in obedience to said law does hereby issue to L. G. McElhaney this certificate attesting the

entry of his name on the list of accredited physicians this the 21st day of May, 1923.

W. F. Smith, President H. A. Ross  
W. H. Toland, Vice President J. T. Palmer  
J. W. Walker, Secretary J. A. Bogart  
J. C. Swindle

—Bull. A. M. A.

**PHYSICIAN ARRAIGNED FOR PRESCRIBING NARCOTICS**—Dr. A. Lee Smith, Detroit, Mich., was recently arraigned before United States Commissioner J. Stanley Hurd, charged with violation of the Harrison Narcotic Law, according to reports. Dr. Smith, it is alleged, prescribed narcotics in attempting to cure patients of the drug habit.—Bull. A. M. A.

**CHIROPRACTOR LOSES APPEAL**—The Court of Appeals, Cleveland, Ohio, June 30, upheld the chief justice in the municipal court in the conviction of Albert J. Schnacke, chiropractor, for practicing without a license, according to reports. Schnacke was the only one of a score of other chiropractors recently convicted in municipal court who appealed his case; the others were fined \$25 each, but chose to go to jail.—Bull. A. M. A.

**PATIENT SUES CHIROPRACTOR**—Walter G. Knoblauch, chiropractor, Milwaukee, Wis., is defendant in a suit for \$50,000 brought by Mrs. Alvina Faulkner who alleges, it is reported, that too much pressure was used in treating her for an alleged dislocated spine and that as a result she received injuries which made her a cripple.—Bull. A. M. A.

**ABRAM'S FOLLOWERS TO BE EXPELLED**—The Barnwell County Medical Society of South Carolina, adopted resolutions, May 30, it is reported, to expel all members who now or may in the future practice the Abrams methods. Barnwell, it is said, is the pioneer County in the state to disown the Abrams disciples.—Bull. A. M. A.

**PHYSICIAN NOT GUILTY**—Dr. Louis L. Jacobs, who was tried at San Diego, Cal., for the murder of Fritzie Mann, was found not guilty, July 21, it is reported. The jury was composed of eight men and four women.—Bull. A. M. A.

**TWENTY-TWO CHIROPRACTORS JAILED**—Twenty-two chiropractors of Toledo, Ohio, found guilty of illegally advertising and practicing medicine without a license, were committed to jail, July 24, to serve approximately a year, after refusing to pay fines of \$200 each, it is reported.—Bull. A. M. A.

**GROCERS FINED FOR SELLING MEDICINES**—Eighteen grocers of Joliet, Ill., were fined \$20 each and costs for violating the state law which prohibits the sale of drugs except by a pharmacist. It has been the custom, it is reported, for grocers to sell iodine, glycerin, castor oil and other well known family remedies, and they were assured by the wholesalers that this was not in violation of the law.—Bull. A. M. A.

**UNLICENSED PHYSICIANS ON HOSPITAL STAFFS**—In answer to a complaint against the practice of retaining unlicensed physicians on the staffs of city and state hospitals of New York, which practice prevents some fully qualified physicians from obtaining appointments, William Drennan, municipal civil service commissioner, and

Bird S. Coler, commissioner of public welfare, have admitted this is being done. They claim, however, it is reported, that there has been no improper selection of appointees, and that non-licensed physicians have been given these positions, owing to a "serious shortage" of young physicians competent to fill vacancies. They point out that such appointments were made possible by an amendment to the public health law in 1918 as a war emergency. It was understood that the license clause would be restored when conditions became normal. It is said that the Kings County Medical Society will take this matter up at its next meeting, to see that steps are taken to rescind the amendment.—Bull. A. M. A.

A small matter, indeed—we know one city having its medical department completely manned by undergraduates.—Ed.

**SIX HUNDRED PER CENT** is the amount of increase in Oklahoma's state taxes, according to Luther Harrison, Editor of the *Holdenville Democrat*, and in reading what Mr. Harrison has to say about the matter, Oklahoma physicians are to understand that perhaps no man is better qualified to speak upon the matter than the editor in question.

"It would seem that an increase of 600 per cent in state taxes ought to be sufficient; yet the end is by no means in sight. Six weeks hence the voters are to adopt or reject a constitutional amendment that if adopted will increase the state tax levy another 3.87 mills at the very least. This is the amendment providing state aid for weak grammar schools. Its adoption would require the state to levy a tax sufficient to pay schools \$15.00 for each pupil attending school in that district. Under its provisions the state might pay the districts \$100.00 or even \$1000.00 per pupil. There is no maximum levy under this amendment and if the voters adopt the amendment only the sky is the limit to state taxes in Oklahoma."

This is undoubtedly one of the most serious matters ever confronting the Oklahoma voter. Oklahoma physicians should make it a point in their good citizenship program to warn every person over which they may have influence of the dangers of the situation.

"**DIRECT ACTION**" is evidently the slogan of our present State Commissioner of Health, who recently, when he found a building badly needed by the State at the old Darlington Indian Agency, in the hands of a remonstrant, recalcitrant tenant, who claimed to hold some sort of title until September 30, met the issue rather more promptly than a Judge of some Canadian County Court felt he should and also, in somewhat different manner than the Judge felt was warranted under the American Constitutional Bill of Rights. At any rate, when the smoke of conflict and been cleared, the State Commissioner was found in supreme charge. He had simply given the "do-nothings" striking example of how he thought the thing ought to be handled. By asking for a court order, some sort of injunction? No, not on your life. The doctor simply ordered a truck backed up to the building in question, neatly placed all the recalcitrant's belongings in it and had them carted off the premises. That seems to most people the most practicable way to handle such a matter, but the court thought differently. Now our State Commissioner is charged with "rioting" and all sorts of unusual things. On the outcome we will wager our last penny that the doctor wins, regardless of what the fleeting, futile idea of some court may be upon the subject.

DR. DAVENPORT'S troubles are none if not legion. He seems doomed to find trouble lurking around just any corner he may happen to approach. One of his latest troubles arose when he found two helpless children, "scientifically" undergoing Christian Science treatment. That was not the Commissioner's idea of "treatment" at all. All his medical life, he has had it instilled into him differently, so the most natural thing appealing to him as a line of action, again very "direct" too, was to ambulance the two sick children to one of the best hospitals in the State, one where a bath a day keeps illness away, etc. But again, one of these "Constitutional Rights" pests intervened. He intervened with a witness who swore that he had typhoid fever, not so long ago, that the Christian Science system "cured" him, therefore, the court most naturally and sagely sided with the "Scientists," who cure diseases where no such thing as disease exists. Again our State Commissioner lost and had to sadly cart his charges back to the tender mercies of the "C.E.'s." In this case we stand strongly for and with the court. Why should the Commissioner worry? Have we not the right to go unbathed if we wish? Suppose we do get typhoid and gently distribute it over the neighborhood, into the homes of the Catholic, the Baptists, even into the homes of some Chiropractic, incidentally kill a few in the process, have we not the right to murder as much as we please so long as we do it by indirection and not by knife and pistol-ball? We cannot see why Dr. Davenport should be worried over these things. It is only his sworn duty, and there his functions end, to protect, as far as possible, the human beings of Oklahoma from infections and death. If we occasionally find some inhuman murdering his child by inaction; since when does the Oklahoma Constitution not give him that very right?

LORD BIRKENHEAD, lately severely criticised for what some of the over-zealous friends and admirers of Ex-President Wilson, seemed to interpret as undue harshness, it seems, was nothing of the sort, and according to the *Outlook*, well within his rights; reading of the comment from Lord Birkenhead on the subject sustains that view. The statement, as to Mr. Wilson, was as follows:

"President Wilson, indeed, came with a noble message of hope, but, unhappily, in the sequel, hope proved to be his principal equipment. It is a fascinating speculation whether had he been given health and strength to pursue the campaign which he contemplated, his idealism and personality could have affected the forces of the world.

"I am bold enough, even at the moment when I pay the highest tribute to his unselfish and courageous motives, to doubt it. For the real truth is that, while the whole world requires the encouragement and the light of idealism, the whole world would probably not survive if idealism were given a completely free rein.

"No nation in democratic conditions will ever become the knight errant of the world. The governors of each nation are the trustees of the whole people; and, unhappily, they are removable trustees. They must always keep peace with the beneficiaries of the trust, because the beneficiaries in this particular matter can at any moment discharge them from their offices. And therefore it seems to me that, while the name of President Wilson must always be revered by those who render homage to purposes almost superhuman, yet it must none the less be recognized that his judge-

ment of his own countryment was wrong, and that by the error of that judgment he became, paradoxically enough, the agent of all those post-war development from which his altruistic mind would most especially have recoiled."

TUSKEGEE, (Ala.)—VETERAN'S HOSPITAL has recently suffered unwarranted interference through the foolish, misdirected and inexcusable actions of the Ku Klux Klan. When the Washington office decided to make the personnel up of competent colored physicians, members of the United States Public Health Service, there was at once emitted a howl from the ignorant, ruinous organization, which has already done too much to injure the entire South. This finally culminated in a brazen invasion of the grounds of the hospital by a mob, which attempted to frighten those in authority from the premises. Of course they did not succeed. The Federal government would not suffer such foolishness for a moment, and it ended with the department in charge of the matter doing precisely what it started out to do, manning the institution with colored physicians. How, for instance, would it do to try the shoe on the other fellow. We can conceive what a howl would go up from these self same worthies, if it were proposed to man the institution with white nurses. The whole thing savors of the silliness already too often evidenced by this organization, which, if it continues in existence can only cause trouble by giving the coward who would cover his face with a mask courage to do that which he would not dare do under the light of day with his fellow-man looking on. It seems to us it is high time for everyone to remember that this is the United States of America, where, theoretically at least, all men are created free and equal. It seems to us no saner solution of the matter than placing the institution in question in the hands of competent colored physicians could have been reached.

#### FOR SALE—ONE AUTOMOBILE—CASH!

One Ford car with a piston ring,  
Two rear wheels—one front spring,  
Has no fenders, seat or plank,  
Burns much gas, but you don't have to crank,  
Carburetor's busted, half-way thru,  
Engine's missing—hits on two;  
Three months old (a pretty young thing),  
Shock absorbers n'everything;  
Radiator's busted, sure does leak,  
Differential's dry—can hear it squeak.  
Ten spokes missing—front all bent,  
Tires blown out—not worth a cent.  
Got lots of speed, runs like the deuce,  
Burns either gas or blue grape juice!  
Tires all off—been run on the rim  
But it's a D——— good Ford  
For the shape its in!!!

—Anonymous.

MEDICAL ARTS BUILDING, Oklahoma City; plans have been adopted for the new building, and officers and directors of the enterprise have been elected. According to Dr. John S. Pine, newly elected President, actual work on the building will commence about January 1st. The newly elected board consists of the following: Dr. John S. Pine, president. Dr. E. S. Lain, vice president; Dr. R. S. Parsons, secretary; Dr. Lea A. Riely, treasurer; and Dr. J. A. Hatchett, Dr. C. E. Barker, Dr. Charles L. White and Dr. E. S. Ferguson, directors.

OFFICERS OKLAHOMA STATE MEDICAL ASSOCIATION  
1922 - 1924

President, 1923-1924, Dr. Ralph V. Smith, Daniel Bldg., Tulsa.  
 President-Elect, Dr. Everett S. Lain, Oklahoma City.  
 First Vice-President, Dr. Charles H. Ball, Tulsa.  
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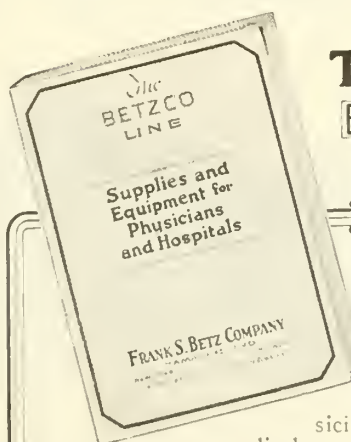
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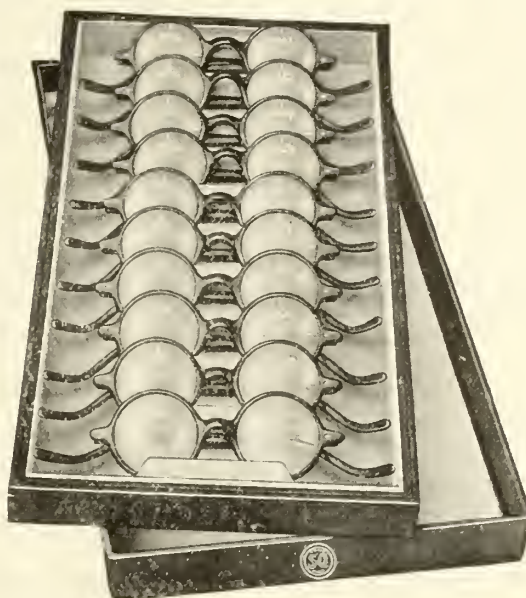
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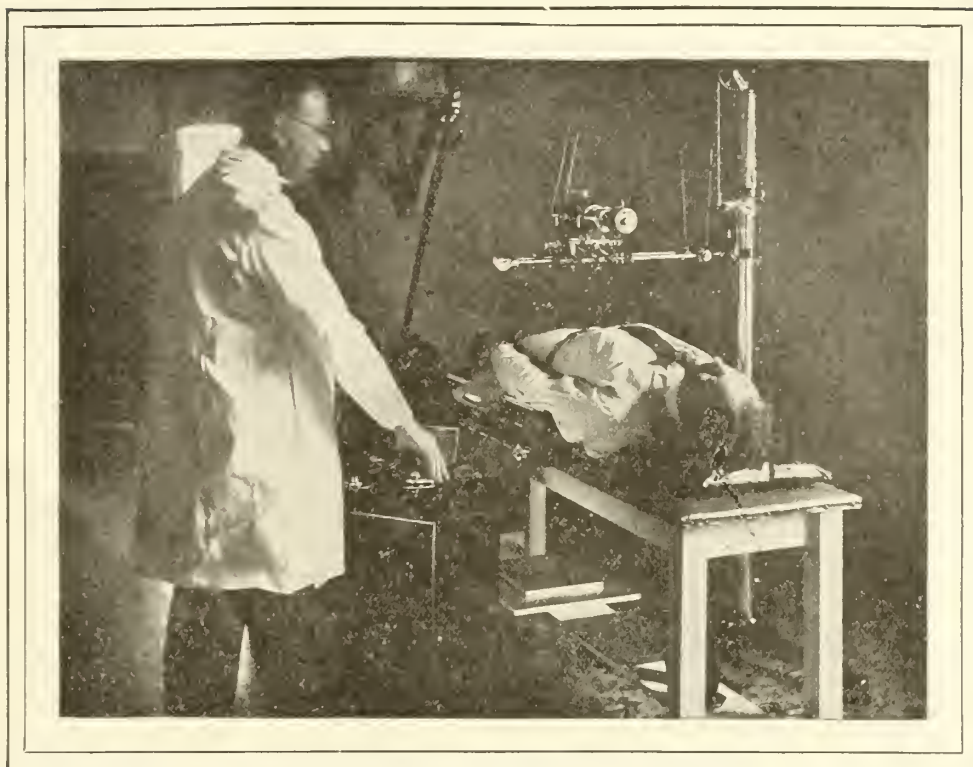
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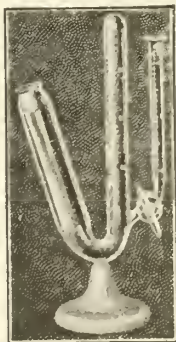
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There are in general two kinds of tissue in every kind of glandular structure—connective tissue and parenchyma, the latter containing the active part. After the glands are dried the parenchyma is reduced to a very fine powder, but the connective tissue is more resistant to the powdering process and retains for a time its threadlike form and consistency. If the connective tissue is finely powdered, as it undoubtedly is in many laboratories, it increases the yield of inert material. Not content to do this, we diminish the yield and further increase the activity of our products by passing our desiccated material through sieves, allowing the finely powdered parenchymatous substance to go through and eliminating the remnants of the inactive connective tissue.

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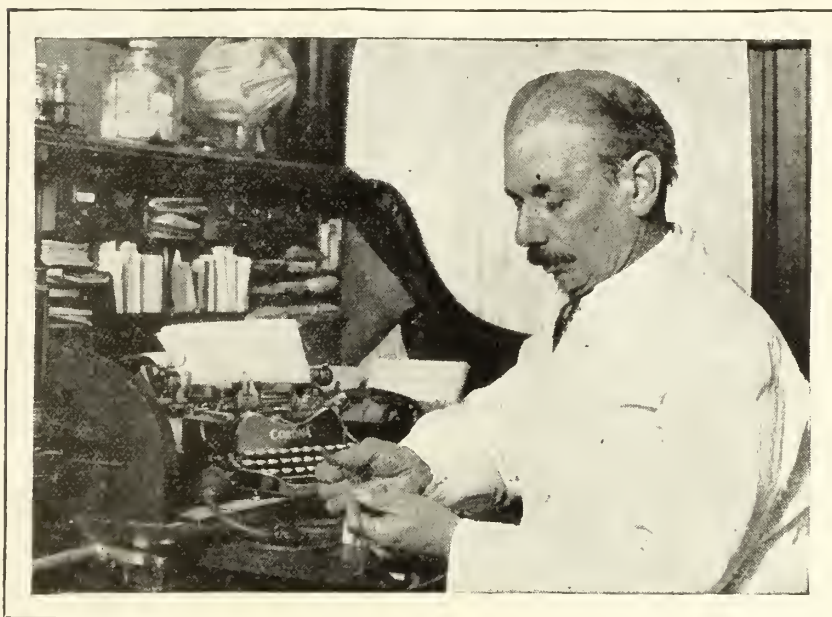
All glandular tissue, of course, contains water, and a manufacturer whose prime consideration is price would dehydrate by the use of acetone or wood alcohol because these not only remove the water but eliminate the fats in one operation. The acetone or alcohol methods cannot, however, be used in all products, because the active principle would thus be exposed to partial extraction. The only safe plan of dehydration is by the use of effective vacuum dryers operating at a temperature not exceeding 130 degrees F. and the use of a fat-solvent only where absolutely necessary. This method effectively removes the water and does not injure the hormone in the slightest degree.

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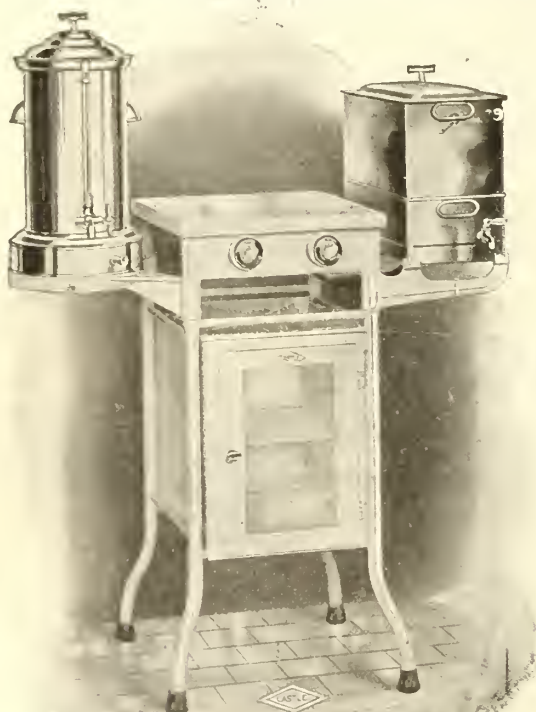
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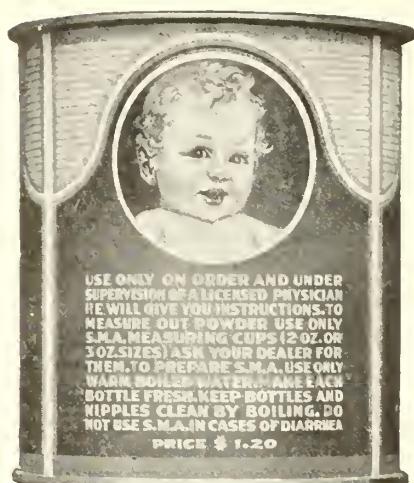
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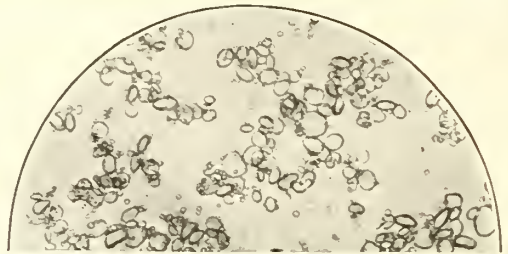
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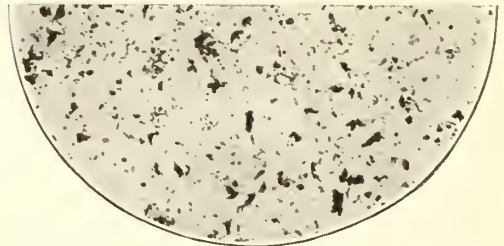
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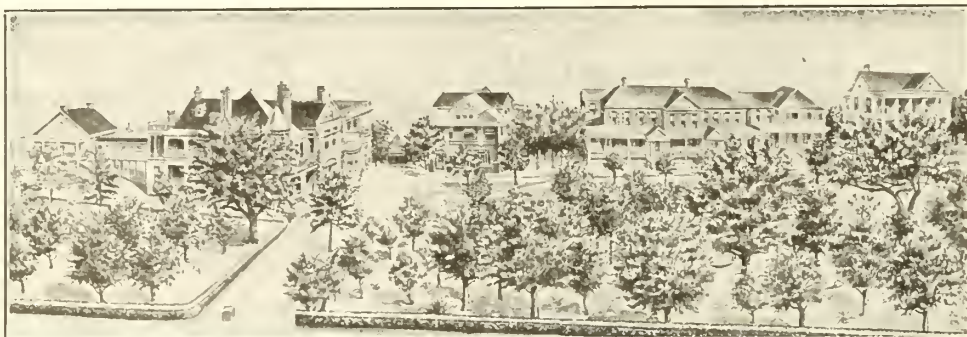
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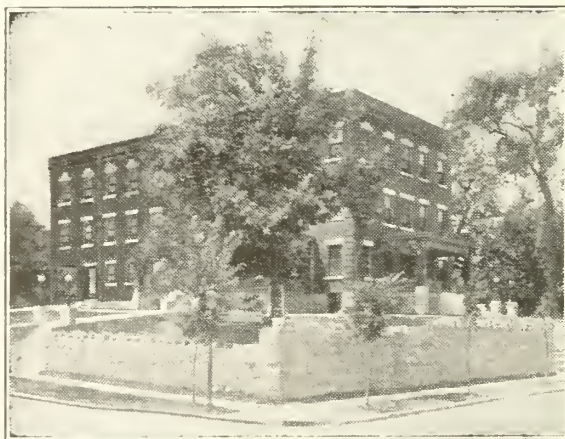
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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

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### SURGERY OF THE TONSIL WITH PULMONARY ABSCESS AS A SEQUEL\*

H. COULTER TODD, A.M., M.D., F.A.C.S.  
Oklahoma City, Oklahoma

Pulmonary abscess following tonsillectomy is one of the most grave sequellae in surgery of the tonsils. Fortunately, it has not been of frequent occurrence. In view of the vast number of operations that have been done upon the tonsils during the past ten years, the number of cases of pulmonary abscess as a result of the operation that have been reported are comparatively few. How many cases have occurred which have not been reported, or that may have gone by unrecognized, we have no means of knowing.

That it is a very grave possibility in all tonsillectomies will not be denied. A most thorough investigation as to its cause, with the hope of finding some means for preventing its occurrence has been the purpose of this study, as it is our hope that with this discussion some new light may be shed upon this rather perplexing problem.

Medical literature offers but little in the discussion of this subject. Frank reports three cases in 1917 and states that the great majority occur after operations done under general anaesthetics in young adults from twenty to thirty-five years of age.

In the three cases reported by Frank, examination of the fauces revealed incomplete or destructive operative results. Two of the cases give distinct history of post-operative bleeding. According to this writer, the majority of the lesions are aspiratory in origin as evidenced by the location of the abscess, or they may be due to a septic embolism. In any case he believes they are largely preventable. In Frank's opinion a

more general use of local anaesthetics for tonsil surgery with the abolishment of the rapid tissue destroying operative methods and a respectful attitude towards hemorrhage will do much towards the prevention of this grave misfortune.

Lewis, in 1918, reported seven cases of lung abscess following tonsillectomy, he expresses the opinion that they are caused by aspiration of pieces of tonsil during operations under general anaesthetics. Simpson and Noah, in 1920, report two cases following tonsillectomies under local anaesthetics and thus they contend that aspiration of infected material during operation could not account for these cases. These men conclude that the condition is the result of a blood stream infection. That during or following operation, septic material enters the veins, passes through the heart to the lungs and finds suitable soil for the production of an abscess. The various reports of lung abscess following other surgical procedures, especially gynecological operations, when aspiration is quite impossible, would help to strengthen the above theory. From our study of the literature upon the subject, we find:

(1) That the largest per cent of the cases occur where the operations are done at clinics or in charity hospitals.

(2) That a general anaesthetic has been used in a larger per cent of the cases. This of course may be due to the fact that general anaesthesia is much more generally used for tonsillectomies.

(3) That incomplete operative work with the bruising of the tissues of the throat by the use of rapid tissue destroying operative methods and a careless attitude towards hemorrhage, may be responsible for this sequellae.

(4) That these abscesses are due either to the insufflation into the lung of infected material, or the taking up of the same by the injured veins of the throat either dur-

\*Read before Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923

ing the operation or after it has been performed.

During all his years as a laryngologist, the writer is fortunate so far in never having had this complication following his surgery of the tonsil.

During the last three years, however, three cases have come to his attention in the two hospitals of the city where he has service. However, ever since the first reported case, several years ago, the gravity of this possibility has called forth the most careful thought and study of a cause for, and a prevention of this unfortunate complication.

As a result, our convictions in the matter are very positive and we think our conclusions are accurate.

As to the cause of lung abscess following tonsillectomy, we believe that they come as the result of the insufflation of infective material into the lung from the throat during or after operation. This material may originate in the nose, pharynx, gums, teeth, or the tonsils themselves, or from infected material taken up by the wounded veins at the time of operation, which is carried into the lung as an infected embolism.

It is our opinion that the form of anaesthetic has but little, if anything, to do with this misfortune, except as prolonged etherization might render the lung tissue less vulnerable. Even this is very doubtful. The suggestion in one of our recent A. M. A. journals that it was caused by the ether spray, and suction machine is not, we believe, deserving of consideration.

Being early convinced as to the source of these pulmonary infections, and the manner by which the infection was carried to the lung, our attention was at once called to the study of some method of procedure that would prevent this grave possibility. As with Frank, we believe that lung abscess following tonsillectomy is absolutely preventable where there is positive assurance that there was not pulmonary infection before the operation took place.

The whole matter is based upon care in the technique of operating these cases, beginning with the preparation of the throat, the anaesthetizing of the patient, the method of operating and the proper care of the patient after operation.

Tonsil surgery, on the whole, has been done with an abandon that is positively

startling, and the wonder is, that the records do not reveal a much greater amount of grave misfortune. Every laryngologist, however, knows from his daily observation of throats, that a vast majority of the very serious results never come to light, and the unfortunate victims are passed along, wondering why their throats should feel as they do ever since they had, or were supposed to have had, their tonsils removed.

Even laryngologists, we fear, do not always appreciate the magnitude of a tonsil operation and the necessity of its being done with the utmost precision and accuracy. They have not given sufficient care to the study of the tonsil and its adenxia, in an effort to remove it with the least possible disturbance to the surrounding tissues. Some are still operating in a pool of blood and as quickly as they can get through, turning the patient upon the face, as they say, "to let him drain," or they are using crushing instruments with which they boast of how rapidly and bloodlessly they can crush the tonsils out, only to find that in many instances, by the time they are gotten to their rooms, and while still relaxed from the anaesthetic so as to insufflate everything that may appear in the throat, they begin to bleed most freely. This has never appealed to the writer as good surgery, and still its one time popularity almost made him wonder whether some ingenious surgeon would not devise some crushing device for amputating fingers and toes, in view of the fact that it could be done so quickly, and for the time being, so bloodlessly, and was so much less laborious than clean careful dissection, as called for in the ordinary method of amputating fingers and toes.

It is the opinion of the writer that tonsils should be removed by careful clean dissection always in the line of natural cleavage, without the slightest injury to any of the surrounding tissues in the throat. No where else would we think of doing nice dissection with a blunt instrument, neither should we attempt it amid the fragile and easily torn structures of the throat, but always with keen edged dissectors. We shall describe to you as briefly as we can our method of doing tonsillectomy with a view of avoiding later complications such as pulmonary abscess.

In most instances, we use general anaesthesia. Partly because the majority of our patients are children and partly because we prefer it. The method of administer-

ing the anaesthetic is of extreme importance, however, and for that reason we employ a regular anaesthetist for this work, who gives all our anaesthetics. The anaesthetic should be given **slowly**, especially at the outset, so as not to stimulate the rapid formation of secretions within the throat. It is remarkable what a difference it makes. It was our custom formerly to use atropine before the anaesthetic, now we never do, and the secretions rarely are annoying. Should we hear a gurgling in the throat from excessive secretions, it should be removed by suction, even while the patient is being anaesthetized, as these secretions may contain infected material which may be lodged deeply in the lung at this time, and be the source of later trouble. The patient should be thoroughly relaxed and the reflexes of the throat abolished while we are operating, but they should not be over anaesthetized. This is where your special anaesthetizer for throat work is of value. He comes to know just when they are in proper condition to operate. During the operation, we use the ether spray and suction, the anaesthetizer knowing just how much of the spray to use during the entire time.

The mouth gag in place, the throat is gently wiped out with steril water or a mild antiseptic and a small catheter is placed through the nostrils and brought out through the mouth over the upper teeth and the ends passed under the loop across the septum of the nose, brought up so as to raise the soft palate taut and clamped in place with a hemostat. Beck, of Chicago, suggested the use of the catheter some years ago, having the anaesthetizer hold the ends and for the express purpose of exposing the naso-pharynx and adenoids. We use it to put all the pillars of the fauces at slight tension, and so retain all the parts of the throat in the same relative position through the entire operation. It does also help to expose the naso-pharynx. Its value in facilitating operative work, clean dissection, etc., however, can never be appreciated unless it is tried.

We seize the tonsil deeply and firmly with a narrow pronged tenaculum, being very careful not to grasp the tonsil plica at any point. If any material exudes from the tonsil when we grasp it with the tenaculum, we are careful to wipe it all away so it may not pass into the lung. With a keen-edged, straight knife and with the tonsil pulled well out so as to put the plica

and pillars on the stretch, we slide the knife under the plica and the tonsillar pillar between these and the tonsils allowing it to simply follow the line of cleavage. The only tissue you must cut is the basement membrane of the inner fold of the plica which becomes the capsule of the tonsil. There may be inflammatory adhesions, but if you follow the line of cleavage these cause very little bleeding when separated by a sharp knife. The capsule of the tonsil is separated from the aponeurosis forming the tonsil fossa by the use of any ordinary dissector and the mere base of the tonsil is removed by a tonsil snare.

As soon as the first tonsil is removed, place a gauze sponge previously made up, about the size and shape of a tonsil, down into the fossa before any bleeding has taken place. This is left in position while the other tonsil is removed and a similar gauze sponge placed in its fossa and left until after the adenoids are removed. Great care is exercised in removing the adenoids that the blood is not insufflated. While the adenoid tissue is being removed, the suction is placed below it and just above the larynx. As soon as the adenoid tissue is removed with the adenotome, a gauze pack of the proper size, previously prepared, is quickly placed up into the naso-pharynx. Any debris or clotted blood which may be present is then gently wiped from the mouth and throat and after about 1 1-2 to 2 minutes, all the sponges are removed from the tonsillar fossae, and the naso-pharynx, when in a large percent of the cases the throats are dry. If there is oozing from one of the fossa we replace a sponge for a minute or more. If not, we carefully inspect all the fossae to see that they are clean and then paint each of them with compound tincture of benzoin.

If we have done a perfect operation, not only the pillars of the fauces are perfectly intact, but over their margins is a double fold of mucous membrane which is absolutely uninjured and which drops down into the tonsillar fossa. These folds are the uninjured tonsil plica. The tonsillar fossa is smooth and looks as though it were covered with an unbroken membrane. The coalesced aponeurosis of the muscles which form it, and beneath this smooth surface you can often see the larger plexus of veins which lie beneath the base of the tonsil and which are so often wounded by careless operation, causing severe hemorrhages and

the possibility of an infected venous embolus.

The operation complete, the patient is put into bed lying upon the face while the nurse is cautioned to observe them carefully until they are sufficiently awake so as not to insufflate anything from the throat into the lungs.

The following points are observed by this method of operating so as to prevent pulmonary abscess.

(1) Care that the patient does not have excessive excretions from the nose, nasopharynx, throat and mouth during etherization, which material may contain infection and be insufflated into the lungs.

(2) Care that no a single structure in the throat is bruised, torn or cut during the dissection, all dissections being done with sharp instruments in the natural line of cleavage even the tonsular plica being preserved intact.

(3) Properly made gauze sponges are placed in the tonsular fossa immediately after the tonsils are removed to prevent the least blood escaping into the throat which may be insufflated. The clean dissection in the line of cleavage does not mutilate the blood vessel or any of the surrounding tissues. The same care is taken in the nasopharynx.

(4) The throat and mouth is thoroughly cleaned and inspected to be sure all the fossae are dry and in good condition and the fossae painted with compound tincture of benzoin to seal the mouths of the blood vessels and prevent, so far as possible, their taking up infected material after the operation.

(5) The aponeurosis beneath which is the tonsular plexus of veins is left perfectly intact, forming a complete smooth surface at the bottom of the tonsular fossae and leaving all these large veins unexposed for taking up infected material.

(6) The patient is so placed after the operation that any secretion which may collect in the throat will not be insufflated and guarded carefully by a nurse until they are sufficiently awake that the reflexes of the throat are active. It is the writer's firm conviction that if the laryngologist will give the proper consideration to his technique in all his cases of tonsil surgery that this very serious complication may be entirely avoided, and pulmonary abscess following tonsillectomy will become a thing of the past.

## EYE INJURIES WITH SOME CASE REPORTS\*

J. C. MACDONALD, M.D.,  
Oklahoma City, Oklahoma

Injuries to the eyeball are one of the most important types of cases that an oculist has to care for, because of the symptoms and dangers that present themselves.

The injury may be due to contusion or penetration of the eye by some foreign body and may involve the cornea, sclera or both with the underlying structures, often times causing impairment of vision if not total destruction of the eyeball.

Contusions of the eye may injure any part of it and varies in degree of severity from an ecchymosis of the conjunctiva to a rupture of the eyeball.

A penetrating wound may be an incised, lacerated or punctured one and the further back the tissues of the eye are involved, the more serious the case becomes. A small wound of the cornea may heal with no impairment of vision, while a similar wound at the corneal scleral junction or of the sclera, may cause loss of vision, if not the complete destruction of the eyeball.

Similarly, the aqueous humor may be almost totally lost and vision return to normal when the wound has healed, but the loss of any appreciable amount of vitreous causes impairment of vision, because with this loss of vitreous there may be prolapse of the uvea into the wound or detachment of the retina.

In every case of a penetrating wound, the condition is serious and unless the object penetrating the eye is known and is found intact, the question of whether or not a foreign body remains in the eyeball is one which must be determined, if possible. To locate this foreign body, we must rely upon direct examination, the ophthalmoscope or the x-ray and if there is hemorrhage into the eye or the media are cloudy, inspection of the eye is often rendered impossible.

A case illustrating contusion of the eyeball is the following: A young man, while hunting quail, was accidentally shot by one of his party. He was struck by several

\*Read before Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

shot and the left eye immediately became blind.

Patient was seen by me about two hours after accident and examination showed a small lacerated wound in upper lid of left eye. The lid was swollen and ecchymotic. The anterior chamber of eye was filled with blood and the bulbar conjunctiva of the upper outer part of eyeball was also ecchymotic. Vision was light perception.

Upon fluoroscopic examination, a small round body was seen directly behind the lacerated wound in lid. As the shot did not move with the movement of the eyeball, it demonstrated to us that it must be outside of the eyeball proper and therefore in the tissues above the eyeball.

The shot was removed under local anesthesia and the eye soon returned to normal condition. The shot did not strike with sufficient force to enter eyeball, after passing through eyelid, but contusions of eyeball with hyphemia resulted.

Another interesting case of contusion of eyeball is that occurring to an infant at delivery. The child was brought in eight days after birth with the following history: The day after delivery the left eye became prominent. This protrusion of the eye gradually increased, as did a swelling of the left temple. Examination showed marked exophthalmos of left eye. The cornea showed a small opacity. There was a fluctuating tumor about one inch behind external angle of left orbit. Upon pressure on this tumor the eye became more prominent.

The tumor was incised and dark blood evacuated. A probe was passed through the temporo-frontal suture and a considerable quantity of dark blood escaped. Upon withdrawal of probe, the eye immediately became less prominent, but the following day the exophthalmos was about the same as upon entrance. The probe was again introduced as before, but practically no blood was evacuated at this time. Due to lack of protection, the cornea ulcerated and a panophthalmitis developed, requiring enucleation. The child made a rapid recovery.

While this trauma did not at first affect the eye so much itself, the post-orbital hemorrhage resulted in the destruction of the eyeball. It is also interesting because of the escape of blood through the temporo-frontal suture.

In any severe injury of the eye, an iridocyclitis usually results if prompt treatment

is not rendered. There may be a panophthalmitis develop from an infection introduced into the eye by the foreign body or it may enter through the opening thus caused. In iridocyclitis there is the production of a plastic exudate which may extend into the vitreous and ultimately becoming organized, may shrink and produce atrophy of the eyeball. The following case which came to the Clinic four months ago, well illustrates this condition.

A boy found some dynamite caps and while knowing what they were, he was not satisfied until he had exploded one with the loss of two fingers and severe trauma to the right eye. He was seen by me twenty-four hours after the accident. The upper lid of right eye was red and swollen and the conjunctiva was ecchymotic. There was a laceration of the corneal scleral junction with protrusion of the iris. The anterior chamber was filled with blood and the vision was nil.

The iris was excised and atrophine instilled daily. X-ray was negative for foreign body. It was two months before the inflammation of the eye disappeared. There was very little pain except on pressure on eyeball. As the inflammation subsided, the tension of eyeball gradually decreased until now the eyeball is considerably smaller in size, and tension greatly lowered. Enucleation of this eye is no doubt the proper procedure, but this the patient refuses.

Another case with practically the same size wound of cornea and slight prolapse of iris, but without the severe contusion suffered in previous case, healed with practically normal vision. A woman, while breaking up a plate to feed chickens, was struck in left eye by a piece of the plate. Patient was seen by me two weeks following injury. The eye showed no evidence of inflammation. There was a laceration of cornea just below the center point with adherence of the inner margin of the lower portion of iris, into the wound. This prolapse distorted the pupil and interfered with vision.

Atrophine was instilled in eye and good dilatation of pupil secured. The eye was then cleansed and with a spatula the wound was re-opened and the iris freed and allowed to withdraw. The wound healed and the iris remained free from it. The eye now appeared normal with no interference of vision.

If there is a foreign body in the eye, we

have a condition which is always serious, usually causing at least the loss of vision in the injured eye and oftentimes resulting in the destruction of the eyeball. Of course, if there is a foreign body present, a reasonable attempt should be made to remove it, but this failing, the only safe procedure is enucleation. For while in a few cases a foreign body may be tolerated for a time, it usually produces an inflammation which may not only affect the injured eye but also the other eye, by a sympathetic involvement.

An interesting case of this type of injury is the following: A young man, while repairing an automobile, was pounding a file with a hammer, when he suddenly felt a sharp pain in his eye. This pain soon became only slightly noticeable and the following day he consulted his family physician who examined the eye and told him he could see nothing in it and that it would probably cause him no further trouble. He had no more trouble with it for about five weeks, when inflammation developed and pain became severe. He was referred to us by his family physician and examination showed the following:

Right eye, vision normal. Left eye, the injured eye, vision 15-20. Ophthalmoscopic examination showed a foreign body apparently in the nasal side of lens and a small opaque area about it. An attempt to extract it with a magnet failed, probably because of the scar tissue formed about it. The following day vision had decreased to 15-40. Being unable to extract the foreign body with the magnet, a capsulotomy was done with extraction of the lens the next day. The lens contained a small spicule of steel about which there was considerable rust formation. The inflammation soon subsided and has caused no further trouble in two years.

The above cases are a few of the different types of cases one sees in his practice. Many of the cases do not come in immediately following the accident but wait until severe symptoms set in before consulting an oculist. Each case is a study in itself and no routine treatment will suffice.

## INDUSTRIAL OPHTHALMOLOGY\*

W. A. HUBER, M.D.,  
Tulsa, Oklahoma

By far the greater part of industrial ophthalmology deals with the treatment of minor injuries, of which the majority are foreign body cases. Although the severe injuries and their treatment are the most interesting phase of industrial ophthalmology, the most important part of the work is the treatment of the minor injuries. The care of these patients involves several important factors.

The ideal method of handling such cases, would be to have the foreign body removed at once. In most cases it is found that not only the foreign body but also stained and devitalized corneal tissue must be removed. Unless this is done the eye remains irritated for some days and is more liable to ulceration. A Graefe knife is used to remove the foreign body after cocain anaesthesia. In all cases, immediately after the removal of the foreign body, mercurochrome is instilled and a triangular pad of gauze with adhesive strips is placed over the eye. The patient is advised to leave the pad undisturbed for twelve hours at least, preferably twenty-four hours. If the irritation is marked, it is necessary to seal the eye for a longer time. If the eye is not comfortable after removal of the pad, the patient is instructed to return for further attention. In most cases, the eye is comfortable and no further treatment is necessary. After being treated, the patient is allowed to return to work and is given some type of work suitable and safe for a man wearing a pad. It is surprising how rapidly nature will fill the gap and cover it with epithelium.

I believe that the occlusion of such eyes is of great value and that it plays an important part in the prevention of corneal ulcers. There are three reasons for such a measure. First, the corneal tissue normally does not have any blood vessels but receives its nourishment by osmosis; second, the closing of the eye prevents the admittance of infection through the dust coming in contact with an open wound; and third, movement of the eye causes discomfort which is minimized by a compress bandage.

The most troublesome cases to me have

\*Read before Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

been those who have received first aid by a fellow-workman who has endeavored to remove foreign body. Unskilled attempts to remove deeply embedded foreign bodies do more harm than good.

After a corneal abrasion, with loss of considerable of the epithelial layer upon sealing the eye, it is surprising how rapidly the destroyed epithelium is reformed. A patient with denuded area comes complaining of the eye being painful. After cleansing under anaesthesia, and the instillation of mercurochrome and the sealing of the eye, the pain ceases.

In all cases in which the history of the accident or the appearance of the injury is such that an intra-ocular foreign body is suspected, a roentgen-ray localization should be invariably made.

In the treatment of corneal opacities following injury, the long continued use of ethyl-morphin-hydrochlorid (dionin) in some cases gives good results.

Success in having men report promptly for the treatment of injuries depends altogether on educating the superintendents and foremen to an understanding that such promptness is essential. By reason of the mandatory wearing of goggles and the use of the various other safety devices, major injuries of all types would be rarely seen.

### Case Report

Mr. P. K. S., 37 years of age, boiler-maker by trade, was referred to me, complaining of monocular diplopia, polyopia and distortion of objects. One month previous, while working a piece of steel lodged in cornea of right eye. Owing to the fact that an oculist was not available at the place, the foreign body was not removed until six days later. In the meantime, the vision in the eye was much reduced and there was considerable pain. After removal of the steel, his vision in this eye improved somewhat but has remained stationary the last two weeks prior to consulting me. On examination by oblique illumination with a binocular loupe under strong illumination, a faint opacity of the cornea was seen in the lower temporal quadrant of the pupillary area. The opacity was very faint, a translucent bluish-white with outlines altogether hazy. The cornea looked like ground glass permeated with striae. With a dilated pupil which brought more of the scar into play, the symptoms were more marked, and with the stenopeic slit at 135 degrees

which excluded most of the scar, the subjective symptoms were less marked. These tests were made to determine whether or not he was malingering. The retinoscope light reflex was too indefinite and the trial case was uncertain. The opacity was the result of ulceration with scar tissue formation due to the recent foreign body in the eye. This case emphasizes the necessity of the prompt removal of foreign bodies to prevent ulceration and scar tissue formation as much as possible. The eye had to be excluded from the field of vision with a frosted glass after the well known remedies had failed to clear the opacity.

The real cause of the disturbance of vision was due to diffusion of light and irregular astigmatism produced by the corneal facet. The irregular astigmatism was due to irregular curvature of the corneal surface which was present at the site of the scar. In consequence of the irregular astigmatism, objects appeared indistinct, distorted and double and multiple.

My object in presenting this subject is to emphasize the importance of the after dressing and care to obtain the most rapid healing and a minimum scar after removal of foreign bodies from the cornea. This case is reported because of its interest and because of the rare occurrence of the condition. I have found none such reported in recent ophthalmic literature with which I am familiar.

### FACIAL DEFORMITIES AS A RESULT OF ADENOIDS\*

HARRY P. PRICE, M.D.,  
Tulsa, Oklahoma

The subject of adenoids is an old one, and it would seem quite unnecessary to go over it again; consequently, I will make this paper as brief as possible—in fact, only an introduction to some slides which I would like for you to see.

There is a borderland between the work of the rhinologist and that of the orthodontist, which has been but lightly touched upon by either; this is too bad, for there is much which the two sciences have in common, and there should be closer harmony and union between them.

We of the Medical profession know that

\*Read before Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

a normal breather is more healthy than an abnormal one. We know that nature intended all of us to breathe through the nose, and how this organ, with its wonderfully constructed mechanism prepares the air for the lower respiratory tract by filtering out the dust particles, moistening and at the same time warming the inhaled air, so that it is always delivered to the lower respiratory tract at an even temperature. Consequently, the normal interchange of oxygen and carbon dioxide gasses can take place in the lungs with the least irritation to the delicate mucous membrane linings of the mouth and throat. With the proper nasal breathing, we have the proper interchange of gasses taking place in the lungs, the blood stream is well oxygenated, resulting in a normal digestive tract and the proper functioning of all organs in the body.

All of this, however, is changed when, for some reason or other, the natural upper respiratory tract is obstructed and the individual becomes a chronic mouth breather. We will only touch on this condition in early childhood and young adult life.

You are all familiar with the etiology and symptoms of adenoids and I will not take up your time by repeating them; it is sufficient to say that most of the cases start with an acute coryza when about two or three years old, the acute condition becomes more or less chronic, the lymphoid ring becomes congested and a hypertrophy of the adenoids is the result. The post nasal space becoming clogged and filled with the over grown tissue. This child from necessity becomes a mouth breather, and right here is where the trouble begins; at this point the patient loses all the normal forces of occlusion; such as muscular pressure of the lips, atmospheric pressure, and the normal pressure of the tongue on the lateral sides of the upper arch of the mouth.

The current of air striking the roof of the mouth (or hard palate) causes the upper or maxillary arch to become high, the loss of the muscular pressure of the tongue causes the arch to remain narrow, while the muscular pull of the lower lip on the upper front teeth being absent, they are allowed to shoot forward and protrude. The mandible (or lower jaw) is not pushed forward, and the lower lip drops under the upper front teeth and becomes thickened from irritation, at the same time allowing the back teeth to assume a distal position.

You are all familiar with the harsh and

dry mucous membrane found in the mouth and throat of this type of case, as well as the chronic tubal inflammations which are a constant symptom of adenoids.

If this condition exists through the period of second dentition, our operations for adenoids are positively of no benefit to the patient, unless we can establish normal breathing, and to do this, in most cases, we require the assistance of the orthodontist to widen the arches, bring the lower jaw forward, the superior maxillary bones are widened, thereby allowing the septum—which in most instances is deviated, due to lack of room in the small nasal cavity—to straighten out, and the nasal spaces become normal.

The habitual mouth breather, in nearly every instance, is undeveloped both mentally and physically. Under oxygenated, they sooner or later develop gastro-intestinal disturbances which usually lead to auto intoxication and is the one first to be taken with all the diseases of mankind.

In the examination of school children, we find approximately ten per cent of the children with this type of case. Accordingly, we should find about the same number in adult life. Dr. McCarty and I counted one thousand adults passing the corner of fourth and main street and found only eight of the entire number with this type of case.

It is now time that we, as physicians, awake to the condition confronting us, and be just a little more careful in our examination of these cases, discharging them only when we are sure that normal breathing has been re-established.

We must realize the importance of removing all nasal obstructions, no matter how young the patient may be, and then if we are unable to get the patient to resume normal breathing, our work will be of no avail, unless placed in the hands of an orthodontist, and he in turn widens the arches of the mouth, and assists to restore the normal facial balance to such an extent that the patient is enabled to breath normally. We, as operators, are condemned when the operations fail to bring about the desired result, when had we explained to the parent beforehand that probably the patient would need the assistance of an orthodontist, they would understand.

The Assistant Superintendent of the insane Hospital at Vinita, tells us that over sixty percent of the imbecillic insane at that

place are of this type of case. Also we are informed that the ratio is about the same in the Institute for Feeble Minded Children at Enid.

The thing I wish to emphasize in this paper is: Establish normal breathing, regardless of the method you have to use; do not condemn a child by your own carelessness to mental backwardness and social ostracism. They are entitled to the benefit of all we know; give it to them.

Investigators along this line tell us that an abnormal breather has not one chance in ten with a normal breather.

I will ask Dr. McCarty to run his slides of this type of case and you will see some of the benefits derived by mechanical treatment of these facial deformities.

#### WASHINGTON MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will hold its seventeenth annual meeting at Washington, D. C., Monday, Tuesday, Wednesday and Thursday, November 12-15, 1923. Dr. W. S. Leathers, Executive Officer, Mississippi State Board of Health, Jackson, Mississippi, is President.

This meeting will be made up of twenty sections and conjoint meetings—the programs of these meetings will cover every phase of scientific medicine and surgery. (See marked bulletin for names of sections and conjoint meetings.)

The President of the United States will receive informally the members of the Southern Medical Association and their wives, Thursday, November 15th, at 12:30 p. m. at the White House. Of special interest to the ladies will be the reception at the Washington Club on Tuesday afternoon where Mrs. Woodrow Wilson will be the guest of honor. The usual reception to the President of the Southern Medical Association will be held on Tuesday night at the New National Museum, one of the most beautiful public buildings of Washington, a detachment of the Marine Band furnishing the music. Other special entertainments being received.

At the first general session on Monday night, in addition to the address of the President, Dr. Leathers, there will be an address by Dr. Geo. E. Vincent, President of the Rockefeller Foundation, New York, N. Y.; Oration on Public Health by Dr. W. S. Rankin, State Health Officer of North Carolina; Oration on Medicine by Dr. Stew-

art R. Roberts, Atlanta, Georgia; and Oration on Surgery by Dr. J. W. Barksdale, Jackson, Miss.

A joint dinner by the Section on Surgery and the Section on Radiology, as well as a number of section dinners, will be interesting features of Tuesday evening. The Alumni Reunions which promise to be an outstanding feature of this meeting will be held on Wednesday night and it is expected that there will be large groups present from all of the leading medical schools.

Physicians who golf are urged to bring their clubs. There will be a golf tournament at which the usual prizes will be offered. Play will be over the championship course of the Columbia Country Club.

The University of Virginia Hospital, Charlottesville, have already announced special clinics for Friday and Saturday following the meeting. While no definite announcement has been made yet, it is anticipated that Johns Hopkins and the University of Maryland will arrange clinic programs for Friday and Saturday following the Washington sessions.

Washington has many splendid hotels and everyone is assured of comfortable accommodations this year. Special reduced rates have been granted by railroads on the certificate plan. Each member of the Southern Medical Association will receive a certificate without application for it. Any physician who is a member of his state and county medical society although not a member of the Southern Medical Association, who desires to attend this meeting, can have the benefit of these reduced rates by requesting a certificate from the Association office.

#### SOUTHERN MEDICAL ASSOCIATION

The Seventeenth Annual Meeting at Washington, D. C., November 12-15, 1923

##### Railroad Rates and Accommodations

The following communication to the members of the Oklahoma State Medical Association desiring to attend the annual meeting of the Southern Medical Association, at Washington, D. C., November 12th to 15th, from the Southern Railway System, is published for the information of all concerned:

For this occasion reduced rates have been arranged. To those provided with "Round Trip Identification Certificates," there will be sold November 8th to 14th, inclusive, round trip tickets to Washington, D. C., at one and one-half fare (from Memphis \$50.36, from other points in propor-

tion). Tickets when validated at Washington any day November 12th to 23rd will be good to return to starting point provided such starting point is reached before midnight of November 23rd, 1923.

Two routes are open to you.

1st. The Memphis Special via Chattanooga, Bristol and Lynchburg. Train leaves Union Station Memphis 7:30 P. M. daily and runs solid to Washington reaching there 12:30 second midnight. Sleeper placed on upper level of Terminal Station and passengers are undisturbed until morning. Tickets via this route should read: Southern, Memphis to Bristol, Norfolk and Western, Bristol to Lynchburg, and Southern to Washington.

2nd. Via Chattanooga, Morristown, Asheville and Salisbury. Leave Memphis also 7:30 P. M., arrive Asheville 1:10 P. M. (CT) 2:10 P. M. (ET) next day, leave Asheville 2:50 P. M. (CT) 3:50 P. M. (ET) and arrive Washington 7:30 P. M. Tickets via this route should read: Southern all the way, Memphis to Washington.

While the Memphis Special carries a through sleeper every day between Memphis and Washington without change, yet on November 10th an extra sleeping car will be operated for special occupancy by physicians and surgeons going to this convention.

If you contemplate going to the Convention will you please advise me and what space you desire and on what date and whether via Bristol, or via Asheville.

C. A. De Saussure,  
Division Passenger Agent,  
Southern Railway System,  
Memphis, Tenn.

## NEW AND NON-OFFICIAL REMEDIES

Asphenamine-Squibb, 1 Gm. Tubes.—Each contains 1 gm. arsphenamine-Squibb (see New and Non-official Remedies, 1923, p. 49). E. R. Squibb & Sons, New York.

Ampules Pituitary Solution—Squibb, 0.5 Cc.—Each contains 0.5 Cc. pituitary solution—Squibb (formerly marketed as solution of hypophysis—Squibb, see New and Nonofficial Remedies, 1923, p. 219). E. R. Squibb & Sons, New York.

Ampules Pituitary Solution—Squibb, 1 Cc.—Each contains 1 Cc. pituitary solution—Squibb (formerly marketed as solution of hypophysis—Squibb, see New and Nonofficial Remedies, 1923, p. 219). E. R. Squibb & Sons, New York.

Pollen Protein Allergens—Squibb.—In addition to the Pollen Protein Allergens-Squibb listed in New and Nonofficial Remedies, 1923, p. 241, the following have been accepted: Apple Pollen Allergens-Squibb; Black Walnut Pollen Allergen-Squibb; Cherry Pollen Allergen-Squibb; Dandelion

Pollen Allergen-Squibb. E. R. Squibb & Sons, New York.

Group Allergens Diagnostic-Squibb.—In addition to the Group Allergens Diagnostic-Squibb listed in The Journal, August 4, 1923, p. 393, the following has been accepted: Group Allergens-Squibb, Type XXIII (Ash, Cherry, Maple, Oak, Poplar, Willow). E. R. Squibb & Sons, New York (Jour. A. M. A., Sept. 1, 1923, p. 749).

Protein Extracts Diagnostic-P. D. & Co.—In addition to the Protein Extracts Diagnostic-P. D. & Co. listed in The Journal, August 11, 1923, p. 477, the following have been accepted: Goldenrod Pollen Protein Extract Diagnostic—P. D. & Co., and Tobacco Protein Extract Diagnostic—P. D. & Co. Parke, Davis & Co., Detroit.

Pollen Allergen Solutions-Squibb.—Solutions containing the sodium chloride soluble proteins from isolated pollens of various species of plants. For a discussion of the actions, uses and dosage, see Pollen and Epidermal Extract Preparations and Biologically Reactive Food Proteins, new and Nonofficial Remedies, 1923, p. 234. Pollen Allergen solutions-Squibb are intended for the prophylaxis and treatment of hay fever. They are marketed in the following forms: Set A: ten vials containing ten consecutive doses (Nos. 1 to 10); Set B: five vials containing five consecutive doses (Nos. 1 to 5); Set C: five vials containing five consecutive doses (Nos. 6 to 10); Set D: five vials of dose No. 10; Set E: five vials of dose No. 11. The following products have been accepted: Timothy Pollen Allergen Solution-Squibb and Ragweed Pollen Allergen Solution-Squibb. E. R. Squibb & Sons, New York.

Malt Extract (Unmedicated)—P. D. & Co.—A preparation essentially similar to extract of malt, U. S. P. (see New and Nonofficial Remedies, 1923, p. 177), but containing 10 per cent of glycerin. 1 Gm. of the extract converts 5 to 7 Gm. of starch to maltose and dextrin in thirty minutes at 40 C. Parke, Davis & Co., Detroit.

Malt Extract with Cod Liver Oil—P. D. & Co.—Each 100 Cc. contains Norwegian cod liver oil, 25 Cc. and malt extract (unmedicated)—P. D. & Co., 75 Cc. Park, Davis & Co., Detroit.

Argyn Tablets, 6 grains.—Each tablet contains 6 grains argyn (see New and Nonofficial Remedies, 1923, p. 330). Abbott Laboratories, Chicago.

## PROPAGANDA FOR REFORM

Administration of Insulin.—The present methods of administering insulin parenterally are far from satisfactory. Consequently, the earliest investigators of insulin and other pancreatic preparations attempted to secure physiologic effects by oral administration. There is evidence that slight effects may be obtained when insulin or other pancreatic preparations are introduced into the organism by way of the mouth under certain conditions. On the whole, however, the oral administration of insulin has proven quite inefficient. Rectal administration and nasal insufflation have been tried without success. A recent study showed that pancreatic extracts taken in capsule form by the stomach was not effective in decreasing blood sugar or urinary sugar. It is desirable to give wide publicity to the current limitations of a most promising therapy, since unscrupulous vendors are already attempting to distribute just-as-good pancreatic or antidiabetic preparations that are recom-

mended for oral use. (Jour. A. M. A., Sept. 1, 1923, p. 752).

**El Zair.**—This is quackery's latest offer of an elixir of life. The nostrum is brought to the attention of the public by El Zair, Inc., New York. The firm claims that the elixir of youth has at last been found. Much is made of the endorsement which the late W. T. Stead is stated to have given the nostrum. El Zair is to be dissolved in water and applied by sponging the body with it daily. The A. M. A. Chemical Laboratory analyzed El Zair and reported that essentially it may be considered to consist of one part of glacial acetic acid and three parts of magnesium sulphate (Epsom salt) perfumed with oil of bergamot. The contents of a bottle of El Zair are to be dissolved in a pint of water and, therefore, an essentially similar solution can be made by dissolving 2 1-2 ounces of Epsom salt in a pint of distilled vinegar. (Jour. A. M. A., Sept. 1, 1923, p. 768).

**Lactic Acid-Producing Organisms and Preparations.**—The Council on Pharmacy and Chemistry reports on the present status of sour milk therapy. During recent years reports have been published which indicate that the growth in the intestine of the normally presenet *Bacillus acidophilus* may be increased so as to make this the predominating organism, by the administration of lactose, by milk fermented with *Bacillus acidophilus*, or by the administration of viable cultures of *Bacillus acidophilus* in conjunction with lactose. Growing out of the claims of favorable therapeutic action, the use of so-called *Bacillus acidophilus* milk and other products prepared with *B. acidophilus* has become quite widespread. While no one subscribes today to the original theories of Metchnikoff, there are many who believe that the regulation of the bacterial flora is of importance. There is evidence that the administration of sour milk is at times beneficial, particularly in pediatrics. A wide clinical observation indicates that for certain types of gastric and intestinal disturbances, fermented milk accomplishes more than unfermented milk. (Jour. A. M. A., Sept. 8, 1923, p. 831).

**Accidents with Local Anesthetics.**—The chairman of the committee for the study of toxic effects of local anesthetics, appointed by the Therapeutic Research Committee of the Council on Pharmacy and Chemistry, publishes a preliminary report. The committee has received reports of forty-two deaths following the use of local anesthetics occurring within the last few years. These accidents have not been reported on by former committees of the Association. The deaths reported are:

Anesthetic	Number
Stovain .....	1
Alypin .....	1
Procain .....	3
Apothesin .....	4
Butyn .....	4
Butyn and Cocain.....	1
Procain and cocain.....	10
Cocain .....	18
Total.....	42

Under the headings Procain, and Procain and Cocain, novocain is included: one is reported as procain and the other twelve as novocain. As the five deaths following the use of butyn are the first reported, the committee is very desirous of receiving full details of other fatalities for com-

parison of relative toxicity. These reports should be sent to the chairman of the committee, Emil Mayer, M. D., 40 East Forty-First Street, New York City. (Jour. A. M. A., Sept. 15, 1923, p. 947).

**Some More Miscellaneous Nostrums.**—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Cowan's Rheumatism Herb (Rheumatism Herb Co.), consisting of dried and moldy leaves of a species of eucalyptus. Jad Salts (Wyeth Chemical Co., Detroit—not John Wyeth Bros., Philadelphia), consisting essentially of citric and tartaric acids, salt, baking soda, sodium phosphate and very small amounts of hexamethylenamin, lithium carbonate and potassium bicarbonate. Crane's Quinin and Tar Compound (Crane Medicine Co.), consisting essentially of quinin, sodium salicylate, ammonium chlorid, Epsom salt, oil of anise, tar, menthol, table salt, calcium phosphate, sugar, alcohol and water. Crane's Liver Pills (Crane Medicine Co.), consisting essentially of aloes and magnesium carbonate. Crane's Kidney Pills (Crane Medicine Co.), containing methylene blue, hexamethylenamin, plant extractive and iron sulphate. Tekol (Colonial Tablet Co.), containing ground celery seed and cocoa with about a half grain of caffeine in each tablet. Veronica Water (Veronica Medicinal Springs Water Co.), containing magnesium sulphate (Epsom salt), sodium nitrate, sodium chlorid (common salt), calcium bicarbonate, calcium sulphate and magnesium chlorid. (Jour. A. M. A., Sept. 15, 1923, p. 946).

**So-called "Improved" Ethers.**—In 1919, Cotton declared that ethyl ether specially purified was not a good anesthetic, and that real anesthesia could not be obtained unless ether contained some potent synergist. He proposed the use of Cotton Process ether which was stated to be ether containing ethylene, carbon dioxide and ethyl alcohol. The manufacturer submitted Cotton Process Ether to the Council on Pharmacy and Chemistry, but so far, confirmation of Cotton's claims is lacking. Wallis and Hewer of England have also recommended a new general anesthetic with the claim that pure ether possesses practically no anesthetic properties, and that their product contains a mixture, in unspecified amounts, of ketones (identified only in vague terms) which have been treated previously with carbon dioxide and ethylene. This product has been placed on the market as "Ethan-esal." It has received some endorsement, especially from Dr. H. E. G. Boyle of London, who made it the subject of addresses on anesthesia in this country. In contradiction of the claims made for Cotton Process Ether and "Ethan-esal," Bourne and Stehle showed that ether prepared in a way to exclude impurities possesses the usual anesthetic properties. A painstaking investigation recently reported by Dale, Hadfield and King confirms the generally accepted belief that the anesthetic action of ether is due to the ether itself. They also report their examination of "Ethan-esal." They found "Ethan-esal" to contain 95.5 per cent. ether, 4 per cent. normal butyl alcohol, and 0.5 per cent. of a mixture of ethyl alcohol and an aldehyd and possibly traces of other substances. The investigation shows that there is no evidence to warrant attributing the anesthetic action of "Ethan-esal" to any other constituent than the ether. On the contrary, the work shows that the anesthetic action of ether is improved by purification. (Jour. A. M. A., Sept. 22, 1923, p. 1040).

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### EDITORIAL

#### "PROFESSIONAL REPUTATION HARD TO BUILD UP, IS EASILY DESTROYED."

"Papers were filed today in a suit for \$25,000.00 brought against a reputable dentist in which it is alleged that a patient died due to an overdose of cocaine." In accordance with its policy, the names are not printed in *The Daily News*. "It requires a long time to build up and cherish a fine professional reputation—but a moment to destroy it."

This is not all that the *Passaic Daily News* has to say about the too loose habit of most

newspapers rushing to print with sensational allegations against reputable men. The newspapers and their editors seem to have a strange system of reasoning this matter out. They hold it to be their inherent right to reproduce any matter filed in any court, regardless of the previous record for fine actions of the man assaulted. They hold that if the matter is filed in any court that it is a matter of public interest, therefore they have a right to reproduce it. Of course they have no such right, for more often than not, these very allegations are filed by the most vicious, irresponsible attorneys, men of the lowest grade of character, shielded by the force of the law which permits them to reduce to writing the most impossible charges. In the end these charges, against both physician and druggist, are nearly never sustained. They often contain the extreme of libelous matter, but the moment it is filed as a petition in court it loses its character of libel, by some strange twist of the law, is allowed to stand until the day the court declares it to be untrue, all ending in no recourse whatever for the person who has really been aggrieved.

#### BE OFF WITH THE OLD BEFORE ON WITH THE NEW

One of the perplexing things of medicine is the habit that will not down, of some of our practitioners repeatedly prescribing large masses of messes, simply upon the recommendation of some detail man, representing a house with something to sell, often of no value to the patient whatever. It is agreed that the habit is not as bad as it once was, that constant propaganda against it is having, and will continue to have results showing a downward trend, therefore increased protection to the man who must eventually pay, the helpless patient, who has no recourse but "sign on the dotted line," the line being in his check-book. Physicians should in every way try to protect the interests of their patients, financial as well as physical. They should not forget that every time they whip out a fountain pen, write a prescription, order it delivered to some person, that a very handsome little bill, out of all proportion to the good effected, as a general rule, will wind up the proceeding. A glance at some of the bills paid for very simple, inexpensive medicines, causes a feeling of protest and outrage. The doctor has it in his power to alleviate these conditions to a great extent.

## THE SKY SEEMS TO BE THE LIMIT

Speaking of charges for drugs and accessories calls our attention to another matter concerning the sick and helpless, which lays the small graft of the druggist entirely in the shade. Nothing can compare with the enormous increase in charges made by hospitals and institutions caring for the sick, when the record of a few short years is reviewed. Reviewing a paper by Dr. E. Mac D. Stanton of Schenectady, N. Y., the **Illinois Medical Journal** quotes Dr. Stanton as giving the following figures, in part, from two New York Hospitals, outside the city of New York. Cohoes Hospital in 1913 charged \$3.00 for the operating room, in 1922 the same charge had jumped to \$15.00, while a special nurse's fee was \$70.00 per week, which did not include her board bill, amounting to an extra \$14.00 per week. Ellis Hospital, Schenectady, in 1912, charged for operating room \$5.00, in 1922 the charge had mounted to \$15.00, special nurse in 1912, \$25.00, in 1922, \$70.00. The gist of the matter being that it cost the unfortunate, and regardless of his social or financial standing, \$35.00 for a fair private room, \$70.00 for special nurse, \$15.00 for operating room, \$14.00 for board, a total of \$134.00 for the first week's service, after which, if things went well it might be that the weekly charge would be reduced to the small and insignificant sum of \$119.00 per week. Certainly this is an amount of money not to be regarded with equanimity by most people, in fact most of our people cannot afford such luxuries at all, and a trip to the hospital spells disaster for many people, not only physical, but financial disaster as well. Here, too, the practitioner should intervene in every way possible. He should realize that every day his patient remains in the hospital, remains under a ten dollar a day nurse, that the conditions may be intolerable and impossible for his patient. Even if it does mean some little extra inconvenience in preparing dressings and similar things at home, that had better be done by a little sacrifice on the physician's part rather than have his charge suffer such severe financial onslaughts as actually exist today in our midst. The patient is too often too proud and sensitive to speak of the matter himself, so he silently suffers. It is up to the doctor in this case to relieve the situation as much as possible.

## REED—FROM SURGEON TO PUBLICIST

Dr. Charles A. L. Reed, in a personal communication announces his vaulting from the position of one of Cincinnati's busiest and most competent surgeons to that of publicist. He, like too few of our profession, lays down the scalpel for the pen in an attempt to carry health matters to the people. He asks for a hint as to how best to reach the man on the street, how best may he influence the "rising generation." Well, he lays down a hard task for anyone to fulfill. It is especially hard to get an answer out of one who has seen the work of years, whatever it amounted to, if anything, swept aside by foolish legislation or lack of any legislation of any sort, who knows the attitude of many of his profession to be that they feel all such efforts to be futile and in the end productive of no good. He asks how to reach "the man in the streets." To that we would say do not attempt it. In the first place he is old and hard-boiled, has reached that stage in life where he admits he already knows all about everything anyway. Does he not read that highly informative sheet, **Hearst's International**? A sheet read by hundreds of thousands, who do not know they are often as not reading skillfully prepared propaganda instead of what they think they are reading, a news article based upon good faith and intent. To that part of Dr. Reed's effort we would advise "do nothing." It is not worth while. Now with the youth of the country, the matter is of vast importance. Advice to them should be forthcoming, but it should be sound. Argumentative and speculative matters should have no place in the message to them, but they should as we have said in **THE JOURNAL** for years, be taught the fundamentals of hygiene and sanitary living. The message to them falls upon fertile, receptive soil, and years after it is given them it will be found productive of a finer citizenship, the American people will hardly recognize in tomorrow, a picture of the man of today. One vicious, ignorant careless person will not be allowed to imperil the health of all the people about him. The walking, automobiling purveyor of disease will at least be a thing rarely to be seen. That phase of the work should be undertaken. The only properly fitted person to pass the message along is the well informed physician. Even in that respect the work has its dan-

gerous aspects, for the passing of misinformation or poorly collected information is not an unknown episode in the experiences of the observing physician. We still adhere to the idea that the high-school is the medium through which the coming generation may be best approached. Here, we again meet what seems to be insurmountable difficulty. The inefficient hand of cheap politics intervenes on every side. This alone is sufficient to dishearten many men who otherwise would be willing to sacrifice their time, imperil their only source of income, for that is exactly what it does. We have seen many good men in Oklahoma compelled to disgustedly throw up their hands and quit, what to them had been a work of inspiration and pleasure, certainly not one of financial profit. Perhaps no more glaring example of this is to be found than in the case of Dr. W. L. Kendall, Enid, Superintendent of the school for feeble-minded children. The good record of years was forgotten in the face of baseless charges from impossible people. The fact that this situation exists should not be allowed, however, to prevent giving aid to future generations. Our profession has a definite position to fill, and even if it is unpleasant, our responsibility should not be shirked. By all means help the youth to help himself.

### *Editorial Notes — Personal and General*

DR. O. H. PARKER, Custer, visited in Texas recently.

DR. GEORGE STRICKLAND, Claremore, is confined to his bed.

DR. D. M. LAWSON, Nowata, attended the clinics at Kansas City.

DR. G. A. WALL, Tulsa, is attending the College of Surgeons at Chicago.

DR. A. L. McINNES, Enid, is at Chicago doing special work in obstetrics.

DR. R. D. LONG, Oklahoma City, has returned from a visit to Amarillo, Texas.

DR. BLAIR POINTS, Luther, was recently called to Chicago, on a professional trip.

DR. and MRS. A. E. CARDER, Coweta, made a short visit to Arkansas last month.

DR. SHADE NEELY, Muskogee, spent a week attending the clinics at Kansas City.

DR. I. V. HARDY, Medford, returned from a three weeks' attendance at the Mayo Clinics.

DR. J. WALTER BEYER, Tulsa, has returned from a six weeks' hunting and fishing trip.

DR. J. R. SWANK, Enid, has returned from a month's work at the Mayo Clinic at Rochester.

DR. K. D. GOSSOM, Custer, returned recently from several weeks' vacation spent in the West.

DR. M. M. McCORD, Helena, has been appointed head of the Institute for Feeble Minded at Enid.

DR. S. J. BRADFIELD, Bartlesville, attended the American Legion convention at Frisco, last month.

DR. B. W. BAKER, Cordell, was taken to Clinton recently for abscess of the throat, and is improving.

DR. A. E. HALE, and family, Alva, are visiting at Kansas City, Mo., where the doctor attended the clinics.

DR. J. O. GLENN, Stroud, is the proud owner of part of a 1500 barrel oil well newly discovered near Bristow.

DR. W. J. RISEN, Hooker, received three fractured ribs recently in attempting to get off a moving train there.

DR. JOSEPH A. PATTON, formerly Stilwell, has moved to Claremore and opened an office at "Radiumtown."

DR. and MRS. J. R. HINSHAW, Butler, announce the arrival of J. Raymond on October 8th, weight 8 pounds.

DR. and MRS. A. HUTCHINSON, Bixby, motored to Kansas City and return, where the doctor attended the clinics.

DR. and MRS. F. L. WORMINGTON, Miami, spent a few weeks at Kansas City, the doctor attending the clinics.

DR. and MRS. B. W. RALSTON, Okmulgee, returned from a three weeks' motor trip in the western part of the state.

DR. and MRS. CYRIL E. CLYMER, Oklahoma City, are visiting in Illinois with friends and will spend a week at Chicago.

DR. E. E. NORVELL, Wynnewood, attended the meeting of local surgeons of the Santa Fe Hospital Association at Temple, Texas.

DR. J. A. JONES, Ponca City, returned from a hunting trip in the Rockies, bringing along a bear hide to prove his marksmanship.

DR. MORRIS LHEVINE, Tulsa, is again in his office after two months spent in the northern and eastern Radiographic laboratories.

DR. R. F. CANNON, Miami, returned recently from a three months' trip through Europe, having visited London and Paris and other points.

KIOWA COUNTY SOCIETY had an interesting meeting September 14 at Hobart, the principal activity being the performance of an autopsy.

DR. J. R. CALLAWAY, Pauls Valley, returned from a visit to his wife at Kansas City, where she has been for some time for special treatment.

DR. W. M. CAMPBELL, Vinita, returned recently from a month's vacation in the West, leaving Mrs. Campbell in Utah, where she is visiting relatives.

DR. G. A. WATERS, Lenapah, was appointed health officer of Pawnee County, taking the place of Dr. T. F. Gastineau who has moved to Vinita.

DR. CLARA F. PALMER, formerly of McAlester, has given up her practice there to enroll in the freshman class at Norman in the school of law.

DR. MARVIN E. STOUT, Oklahoma City, has severed his connection with the Oklahoma City Clinic and opened offices at 304 Patterson Bldg.

DR. E. A. AISENSTADT, Picher, has been appointed chairman of the Hospitalization Committee of the Oklahoma Department of the American Legion.

DR. JAMES C. BRASWELL, Tulsa, is attending the annual meeting of the American Academy of Ophthalmology and Oto-Laryngology at Washington, D. C.

DR. and MRS. G. W. GOSS, Pawhuska, returned recently from a trip to Kansas City where the doctor attended the clinics, and from a visit to Smithville, Mo.

DR. CHARLES EDGAR WHITE, Pawhuska, was married to Miss Carolyn Hearn Hurt, daughter of Dr. and Mrs. Henry P. Hurt, of Memphis, Tennessee, on October 8th, 1923.

DR. WINNIE M. SANGER, Oklahoma City, has been appointed in charge of the health supervision of women students of the University at Norman, and will lecture on health problems.

DRS. I. D. WALKER, DR. and MRS. A. S. RISSER, DR. and MRS. J. C. HAWKINS, and DR. A. C. SYFERT, Blackwell, have returned from Kansas City attending the clinics there.

DR. NEWTON RECTOR, Hennessey, attended the national encampment of the G. A. R. at Milwaukee, stopping off at Streator, Illinois, to take part in the regimental reunion of his old regiment.

WOODS COUNTY SOCIETY met at Waynoka last month in semi-annual convention at the city hall, with the president, Dr. James Bowling, Alva, presiding, and Dr. O. E. Templin, Alva, as secretary.

DR. H. D. MURDOCK, Tulsa, and family, have returned from a motor trip to the Pacific Coast, via the southern route, thence up the Coast to Washington and back home via Yellowstone Park and Colorado.

DR. WANN LANGSTON, Oklahoma City, was married October 6th, to Miss Clara Louise Jones, at Oteora, New York. The bridal couple will be

at home after November 15th at 1220 West 12th Street, Oklahoma City.

MCINTOSH COUNTY SOCIETY met at Checotah October 9th, and had one of the usual good programs with a paper, "Vomiting in Infancy and Early Childhood" by Dr. C. V. Rice, Muskogee, as the opener, followed by a clinic and report of cases.

DR. J. H. MORGAN, Tulsa, and family, left for Texas in June in quest of a place where Dr. Morgan could be freer from the increasing asthmatic attacks he has been experiencing. Word from San Antonio that the Doctor is much better will be very grateful to his many friends in the State.

CUSTER and WASHITA COUNTY SOCIETIES held a joint meeting at Clinton last month. The program consisted of an address by the state commissioner of health, Dr. A. E. Davenport, and papers by Dr. A. J. Jeter, Clinton; Dr. A. S. Neal, Cordell, and Dr. E. E. Darnell, Clinton. Discussions by Dr. K. D. Gossom, Custer and J. J. Williams, Weatherford.

DR. WARREN T. MAYFIELD, Norman, chairman of the clinic committee of the Norman Kiwanis club medical clinic for underprivileged children, opened the clinic at the Red Cross rooms there last month. It is fully equipped for examinations and minor operations, and will care for patients on Tuesdays and Fridays, with a staff of Norman doctors in charge.

DR. EARL MILLER has been appointed Director of the Department of Experimental Medicine of Parke, Davis & Company, Detroit, to fill the vacancy following the death of Dr. Ezra Read Larned, who was the originator and organizer of this department and occupied the position as head of the department until his death. Dr. Miller was assistant to Dr. Larned for twelve years and has a wide acquaintance among medical men interested in clinical research work.

SAPULPA MEDICAL SOCIETY held monthly meeting last month at the nurses home and found a large attendance to discuss the newly organized training school for nurses at the city hospital. Following the meeting, refreshments were served. Those present were: Drs. G. C. Croston, H. S. Garland, P. K. Lewis, H. R. Haas, Ellis Jones, Alva Jones, J. B. Lampton, W. P. Longmire, J. M. Mattenlee, J. S. McAllister, W. B. Robinson and L. L. Smith.

MUSKOGEE COUNTY SOCIETY met October 8th with a large attendance for the initial fall meeting, having as visitors several of the staff of the U. S. Soldiers Memorial Hospital. An interesting paper on "Insulin" by Dr. Charles W. Heitzman was discussed freely. Dr. S. G. Hamm, Haskell, was elected to membership. A symposium on Lobar Pneumonia will be presented at the next meeting October 22.

MORNINGSIDE HOSPITAL, Tulsa, announces an addition that will increase the Institution by 30 beds. It is the plan to extend the present building forward to the building line. The addition will be three stories and is greatly needed. Morningside Hospital has become organized dur-

ing the summer months. Their advertisement containing the list of the staff appears in the advertising pages. Staff meetings are being held regularly and the Hospital is going forward under the reorganized plan.

**UNIVERSITY OF OKLAHOMA**—Enrollment in the University school of medicine has been closed with the acceptance of 53 freshmen and 46 sophomores, it was announced by Dr. L. A. Turley, assistant dean of the school. Lack of facilities and space was given as the reason for limiting the number of students. Enrollments this year are greater than ever, Dean Turley says, adding that when the new building for the school is completed, there will be ample room for all students who desire to enter.

**DR. J. W. DAY, (D.D.S.),** Tulsa, announced on September 2nd that, after numerous delays, work will shortly commence on the Medical Arts Building at the corner of 6th and Boulder Avenues. Foundation will be for a 12 story building but present plans are for one of 8 floors. The first floor will be used by drug store, surgical supply house, optical house, six floors for offices. Every convenience will be provided; many not found in commercial buildings. There will be shower baths in basement, rest room for female attendants of offices. Compressed air outlet in each room, etc. The top floor will have an emergency hospital. The building will contain assembly room for the Medical and Dental Societies and to house a library.

**TULSA COUNTY MEDICAL SOCIETY** held its first meeting after summer vacation on Monday, September 24th, with a large attendance. Dr. Jeff Billington was elected a member of the Society and Drs. T. R. Roberts, E. A. Hawk and R. C. Farris were received by transfer from Rogers, Beaver and Muskogee counties, respectively.

Dr. D. L. Smith read his paper on Bi-Chloride Poisoning. The paper was very interesting, well received and freely discussed.

Invitations to attend the meetings of the Mississippi Valley Medical Society and the Kansas City Clinical week were read.

The Secretary was instructed to write several prominent physicians who have promised members that they would appear before the Society and asked them to read their papers in the near future.

### A CORRECTION

The JOURNAL last month printed the obituary of Dr. Charles B. Barker, Guthrie, taking the information from the usual source, a press clipping. Since then, to our pleasant surprise, we have learned that the information of Dr. Barker's demise, like that of Mark Twain's, was grossly exaggerated and we are glad to print below Dr. Barker's letter on the subject:

C. A. Thompson, M.D., Editor,

Muskogee, Oklahoma.

Dear Dr: In your last issue of the State Journal, my obituary appeared. As I'm still alive, I hope your Journal is thirty (30) years ahead of its time. It is true, I spent

eight (8) weeks in bed due to typhoid fever, complicated by a carbuncle on the back of my neck, endocarditis and phlebitis in both legs; otherwise I'm all right.

I would very much appreciate it if you would correct this in your next issue so the physicians around Guthrie may know I'm still practicing.

Thanking you,

I am Fraternally,

C. B. Barker, M.D.

### DOCTOR CHARLES C. YEISER

Bryan County's oldest practicing physician, in point of years of service, Dr. Charles C. Yeiser, passed away at his home in Colbert, Oklahoma, September 17, 1923, following a protracted illness, death being due to Bright's disease. Dr. Yeiser has continually been engaged in the practice of his profession for more than 36 years, having come to the country before it had begun to develop. He was born at Macomb, Illinois, on May 26, 1854, and graduated from the Medical College of Evansville (Indiana) in 1884, and leaves one daughter, Miss Craig, a teacher in the McAlester public schools.

Dr. Yeiser was a fellow of the American Medical Association, and a member of his county society and state association. He leaves behind a host of friends made during the long years of service to his fellowman. Funeral services and interment was made at Colbert.

### DOCTOR LOUIS E. McCURRY

The death on September 12th, 1923, of Dr. Louis E. McCurry, at Tahlequah, Oklahoma, took an honored citizen and good physician. Dr. McCurry was born on August 12, 1860, in Tennessee, was licensed in Arkansas in 1890, and had been active in the practice of his profession for more than 21 years in and about Tahlequah. His health had been failing fast since the fatal illness of his daughter six months ago, and his death was not unexpected. Dr. McCurry was married in 1890 to Miss John Etta Moody, the couple having one daughter, Miss Alice, mentioned above, and is survived by his wife and four brothers. He was of a deeply religious nature, and left behind him to mourn his loss, beside his family, are hundreds of friends made during the long years of his practice. Dr. McCurry was for more than thirty years a member of the Methodist Church, and was a member of his state association.

Funeral services were conducted at the Methodist Church at Tahlequah, and the interment in the Tahlequah cemetery, under the auspices of the Masonic order, of which Dr. McCurry was an old member.

**GENERAL SURGERY**

Edited by G. A. Wall, M. D., F. A. C. S.  
303 Palace Bldg., Tulsa

**OLD MASTERS**

PHILIP SYNG PHYSIC (1768-1837), of Philadelphia, a pupil of John Hunter's, and sometimes called the Father of American Surgery, was an Edinburgh graduate of 1792, surgeon to the Pennsylvania Hospital in 1794, and professor of surgery in the University of Pennsylvania (1805-18). He wrote nothing of consequence. He is now remembered principally by certain procedures of importance in their day, such as the introduction of absorbable kid and buckskin ligatures, the use of the seton in ununited fracture, an operation for artificial anus (1826), the advocacy of rest in hip joint disease (1830), and the invention of the tonsillotome (1828).

His modification of Desault's splint for fracture of the femur is still in use. He seems to have been the first to describe diverticula of the rectum (1836), and he was the first American to wash out the stomach with a syringe and tube in a case of poisoning (1802).

**TUBERCULOUS ADENITIS: ITS SIGNIFICANCE AND SURGICAL TREATMENT.**—Beck, Emil G. *Surg. Clinics of N. A.*, Aug. 1923; P. 1144.

The author states that in reviewing the development and changes in the treatment of tuberculous adenitis of the neck, one is impressed by the fact that 20 years ago there were many operations for tuberculous glands, while now we see such procedures only occasionally. Recurrence was frequent and the scars which remained were common and unsightly. He thinks it possible that the removal of the tonsils in early childhood is one of the preventive measures against enlarged glands.

The chronic and gradual enlargement of the glands is not a disease per se, but he considers it a secondary infection, the eprimary focus of which is usually in the mucous membrane of the upper air passages, tonsils, teeth and sometimes in the accessory nasal sinuses: The enlargement is not always of tubercular origin, and when the affection is acute the enlargement is only temporary and subsides as soon as the primary infection has subsided. Some children around the ages of three to six years, sometimes several members of the same family have a slight enlargement of the glands back of the sternocleido mastoid which may or may not be tuberculous and gradually disappear without suppuration. This result is brought about by one factor, called immunity. He states that we find in every individual over 25 years of age some evidence of gland involvement, such as shadows in the lung especially in the hilus, and deposits of calcium salts which give a definite shadow; this does not mean active disease but that the patient has recovered from a disease which has previously existed. He proved this on a series of healthy nurses, the streoroentgenogram of their chests showed not a single case free from glands in the hilus of the lungs. He advises against operation when the picture shows the glands to have undergone calcification, if the patient does not object to the deformity and the health is unimpaired.

The author is much impressed with the theory of immunity against disease and divides it into three classes, viz: natural, acquired and artificial.

Natural immunity varies in different individuals and in different stages of their lives. If there were no immunity the child at birth would succumb from the first inhalation of air, because of the various types of pathological micro-organisms present. He says that tuberculosis has a great tendency to immunize the body, since if this was not true, all once affected with tuberculosis would die.

Tuberculous glands are not confined to the neck but are more frequent in the hilus of the lung than elsewhere. Abscesses called "colds" are broken down tuberculous glands in which the pus is sterile. Enlarged glands of the neck are by no means all tuberculous, since we have enlarged glands following tonsillitis, measles and scarlet fever. When the glands develop slowly and keep on increasing or remain stationary we should suspect the tuberculous type, although not entirely true, for we should eliminate multiple sarcoma, Hodgkin's disease and infections due to nose, throat or teeth. Multiple sarcoma is not limited to the neck but is found in all parts of the body, while Hodgkin's disease in its incipency is often mistaken for tuberculosis, but in this case the enlarged glands are found in the lungs, spleen and under the arms in the axilla. The tumors are much harder as a rule, not separated but adherent to one another and feel like a fibroid tumor, and the diphtheroid bacillus may be cultured from the tissue.

Regarding the treatment he states that surgeons do not decide as readily upon their removal as they did 20 years ago, and he has done only three resections in the past ten years in a large series of cases. The course of procedure depends largely on the stage and extent of the disease. Enlarged glands of recent occurrence and where the infection is acute should be let alone for the time being, since they will usually recede, but if the enlargement persists, and the glands keep on growing, hunt for the focus of infection. Have the teeth examined by a competent dentist with the radiograph; the nose and throat should be examined and any tonsillar disease should be treated.

Tonsillectomy is especially indicated when they are diseased and he has seen the glands disappear after their removal in many instances. This should all be done before treating the glands themselves, then if they do not decrease resort to deep x-ray or radium therapy.

If the glands undergo caseation or suppuration, then it is best to make a very small incision under local anaesthesia, eliminate as much as possible of the cheesy mass and inject with a 10 per cent bismuth paste: If the gland does not reduce in size it may be necessary to resort to resection, in which case the wound, if not too large, should not be sutured, but the cavity should be left open and packed with gauze for 24 hours, then remove the gauze approximate the edges by adhesive plaster. This procedure leaves less prominent scar and less tendency to keloid formation.

In most cases where sinuses originate in bony structure, it is necessary to remove the diseased bone before we may expect any results from the bismuth treatment.

**CONSERVATISM IN ACUTE PELVIC INFECTIONS.**—Polak, John O. *Surg. Gyn. and Obst.*, Sept. 1923, P. 414.

The author states that a better understanding of the physiological pathology in pelvic lesions, and more minute study of the habits of bacteria and tissue reaction excited by the entrance of

pathogenic bacteria, have done much to swing the pendulum toward conservatism in pelvic infections. The bacteria reach the pelvic tissues through an abrasion or wound by way of the lymphatics, through the placental site, or along the mucous membrane of the cervix uterus and tubes.

The common type in puerperal infection are the streptococcus, the staphylococcus and occasionally the pneumococcus and gas bacillus of Welch. In nonpuerperal infection the gonococcus alone or the streptococcus alone, or both combined, are the exciters of the reaction. The whole process of normal labor is so arranged that it is combative of infection. There is a natural dividing line of the utero-vaginal tract at the internal os into an infected zone below and a sterile zone above. The lochia is bacterioidal in the first few hours after delivery and the liquor amnii cleanses the passage, and other factors are conducive to the prevention of infection, hence unless bacteria are carried into the sterile zone and inoculate the wound, nature is competent to offer the necessary resistance.

He contends that infection occurs by introduction of bacteria through traumatism of the cervix; through inoculation of the uterine wound itself and through the placental site. Wounds of the cervix are the most common points of entrance in all hurried or in prolonged dry labors and if the infection is virulent, the patient is given no chance to establish her immunity. He thinks that in acute puerperal infection surgery should be confined to incision and drainage of the cul-de-sac or parametrial abscesses, or drainage in a spreading infection. In puerperal endometritis with a profuse fetid lochia, an open cervix, uterine pain and relaxed soft tender uterus, these ends may be obtained by the III tube and iodoform gauze drain with alcohol instillations.

None of the medical measures, such as curettage, hysterectomy or ligation of the pelvic veins are justified in the light of our present knowledge, he asserts. In acute gonorrhoeal infection active surgery has no place. The Fallopian tubes are the final resting place of the Neisser bacillus, where it remains latent for indefinite periods and dies in from six to eight weeks after the fimbriated end becomes occluded, provided rest and conservative measures prevail.

**BRAIN ABSCESS.**—Harry Hyland, M.D., C.M.  
Arch. Surg., Sept. 1923. P. 297.

Abscess of the brain may be single or multiple, and any pus producing organism may be the exciting cause. The condition is always secondary to suppuration elsewhere, following most frequently infections of the ear or sinuses, still it may follow infection elsewhere in the body, and may follow traumatism of the skull in perforating fractures.

It is usually found in adults and is supposedly rare in children. Abscess of the frontal lobe is relatively rare since Eagleton, in an exhaustive review of published cases, found only about 150 frontal lobe abscesses reported, while more than 900 cases of abscess of the middle cerebral fossa were found by him in the literature. In the author's analysis of 113 cases, he found that about half of them were not recognized until autopsy. The mortality is very high (75 per cent) and is much higher among patients operated on late. He lays great stress on the need for an earlier diagnosis, so that the condition may be attacked during the latent and more hopeful stage. He concludes that the pathology of the condition is a lo-

calized encephalitis, the infection reaching the cranial contents by direct extension from an adjacent abscess, or by septic emboli from a distant process. At the outset the process may be called an "acute softening of the brain" and its progress may be very rapid, ending in death. At times the abscess may become encapsulated, producing a quiescent stage, which may last many months or years, but eventually one of two things occurs: The abscess ruptures or a secondary encephalitic process starts, progressing to a rapidly fatal issue. Rupture of a brain abscess may occur when the condition was not suspected, and because the frontal lobe is a so-called "silent area" it is particularly susceptible to this condition.

The symptoms are general and focal. The general are those of an infection plus increased intracranial pressure: The chief complaint is headache and there may be vomiting and convulsions or stupor. The temperature may be normal or subnormal, and leucocytosis of a low grade is common but often lacking in the latent stage. Pressure symptoms are usually lacking or inconspicuous, since the process destroys rather than displaces the brain tissue.

In the early and acute stage the diagnosis must rest on the evidence of intracranial involvement from a neighborhood infection, especially of the middle ear or head sinuses, and of headache, choked disk, slight temperature rise and leucocytosis, plus focal symptoms. These can be made sufficiently early for surgical intervention to give a fair chance of recovery. Because of a more or less absence of focal symptoms, abscess of the frontal lobe is likely to be overlooked until too late for surgical interference to save the patient. Persistent headache in the presence of infection of the sinus of the ethmoid or orbit, with good drainage, points strongly to involvement of the frontal lobe. Brain abscess should be differentiated from encephalitis or sinus thrombosis. Lumbar puncture is an aid. A high cell count of leucocytes points to meningitis, while a slight increase of lymphocytes points to encephalitis. The surgical principles for treatment are the same as for pus anywhere, but the means of evacuation and after treatment are very different. Kerr draws the following conclusions:

1. Brain abscesses in general are difficult of diagnosis and especially difficult of treatment.
2. Abscess of the frontal lobe of the brain has been recognized before death in only about one-half of the reported cases.
3. The high mortality indicates the need of more careful study of these cases.
4. Persistent headache with sustained leucocytosis and especially the presence of retinal changes, indicative of pressure, in cases of drained frontal sinusitis or ethmoiditis indicate exploration.
5. Exploration by a two stage operation through a sterile field may be indicated.
6. Direct drainage with minimum trauma, should be established and should not be disturbed until all symptoms have subsided.
7. It is of paramount importance to drain an abscess for too long rather than too short a time.

**POST-OPERATIVE CHEST CONDITIONS.**—Thompson, H. T. Edin. Med. J., June 1921.  
Edited by Ochsner, Yearbook 1922.

The author points out that patients who are old or of a certain type, if forced to lie in bed, tend to develop congestion, etc., in the lungs. He calls attention to the chilling of the patient under-

going operation, the temperature of the room, the exposure of the body surface and the coils of the intestine to the air, profuse perspiration and the danger of chilling the patient in transit to bed. These are all to be thought of and adequate measures taken to prevent them. Careful attention to detail is necessary to prevent the distinct risks of chilling and depression of vitality, and one of the effects of these may be the development of a patch of pneumonia congestion or bronchitis. His deductions leave little doubt in his mind but that the anesthetic does play a part and especially so with ether. He deems it important to hesitate before giving ether to a person suffering from or who has recently suffered from bronchitis; be sure that the ether is pure and guard against the possibility of a chill: He questions whether the warming of the vapor acts by preventing the lowering of the body temperature, and it is much more important to attend to the general warmth of the patient: The preliminary administration of atropine is especially important in ether anesthesia. To these precautions Ochsner adds the following, which he says serves to reduce, to a minimum, the occurrence of ether pneumonia.

1. The patient should be thoroughly under the influence of the anesthesia before the operation is begun.

2. It should entirely be stopped and the patient permitted to breathe pure air some time before the operation is completed.

3. The moment the slightest respiratory disturbance occurs after the operation, the head of the bed should be elevated 12 to 18 inches. This will insure—

A. The smallest amount of ether to be given, because the operation continues with addition of very little ether.

B. The patient exhales much of the ether inhaled while the wound is being sutured, and returns to bed not saturated with the drug.

C. The element of pulmonary congestion is eliminated by the position of the patient and this will prevent the occurrence of pneumonia, in almost every case in which otherwise it might be expected.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.  
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**BACTERIOPHAGE, D'HERELLE'S PHENOMENON (Bacteriolysis).—F. d'Herelle, Brit. Med. Jour., London, Aug. 19, 1922.**

"The bacteriolysis produced under the influence of the principle named bacteriophage consists in a total dissolution of the microbial body, at the end of this action there remains no visible residue."

"Four hypotheses are considered concerning the source of these enzymes: 1. The enzyme may be derived from the animal organism which is attacked by the given bacteria, and would then be the result of a defensive reaction on the part of the organism. 2. They may come from the intestinal bacteria as a result of a microbial antagonism. 3. They may be secreted by the bacterium itself which undergoes the lysis, and would therefore be of the nature of autolysins. 4. They may be secreted by an ultra-microscopic virus, which is a parasite of bacteria, as the author believes." "The ultra-microscopic corpuscles possess a variable virulence, and by successive passages, it is possible to increase the virulence of a feeble strain of bacteriophage; experience shows that bacteria

attacked by bacteriophage do not remain passive; they protect themselves and are even able, under certain conditions, of acquiring an immunity towards the parasite. The behavior of bacteriophage towards physical and chemical reagents is that of a living being, as it does not agree with that of an enzyme. It is possible to extract the lytic enzyme from the living bacteriophagic micro-organisms." "The author does not specify the species to which the ultra-microscopic organism belongs, all that is known is that it is a filtrable virus parasite of bacteria, endowed with the function of assimilation and reproduction."

"F. W. Twort (in the same Journal), The conclusion drawn is that it seems probable, though by no means certain, that the active lytic material is produced by the micrococcus, and since it leads to its own destruction and can be transferred to fresh, healthy cultures, it might be considered almost as an acute infectious disease of the micrococci. Where the differences of opinion have existed, the controversy has centered around the experiments carried out to determine the source and nature of the lytic material."

"J. Bordet, (in the same Journal), was the first to advocate that the lytic principle was reproduced by the microbe itself which shows the lysis, in other words that the transmissible lysis is in reality an autolysis betraying a nutritive vitiation primarily started by external influences."

**THE RELATION OF VITAMINS TO THE GROWTH OF A STREPTOCOCCUS.—S. Henry Ayers and Courtland S. Mudge, Jour. Bacteriol., Sept. 1922.**

"The authors experimented with the water-soluble vitamin B. and the fat-soluble vitamin A in their relation to the growth of a pathogenic streptococcus. Their results led the authors to conclude that water-soluble vitamin B is not the growth promoting substance of yeast, at least for the streptococcus used in their work, and that the growth noted when small amounts of fats or oils were added to the media was not due to the fat-soluble vitamin A." These experiments would seem to indicate that the vitamins, which have such a definite and important influence on the growth of man and animals do not occupy the same role in influencing the growth of bacteria.

**ACTINOMYCOSIS IN A FOSSIL RHINOCEROS.—Roy L. Moodie, Jour. Parasitol., Sept. 1922.**

"The jaw of a fossil rhinoceros from the Pliocene formations in the northwestern part of Nebraska shows a diseased condition of the bone which has all the appearance of an actinomycotic osteitis or 'lumpy jaw.' Dr. Moody has done quite a lot of research along the line of fossil evidence of bacterial existence in prehistoric animals. Practically all of this data is confined to the pathological changes in bones and cartilage as by far the greatest amount of material found is of these structures. It has opened a wide field of investigation and demonstrates the vast age of these enemies of man and animals.

**PROPHYLACTIC TREATMENT OF RABIES BY MEANS OF STANDARD GLYCERINATED VIRUS.**—Jas. McL. Phillips, *Jour. Immunol.*, Sept. 1922.

"The author's studies indicate that heat, oxygen, light, moisture and various chemical substances cause the loss of virulence in vaccines for rabies, as they are usually prepared today. When these factors are removed the virus has remained virulent for a period of five years. When the rabbit that is 'coming down' is moribund, it is killed by bleeding as this reduces the amount of protein in each therapeutic dose of the vaccine and reduces the amount of local reaction. The brain alone is used for the vaccine, it is emulsified with glycerine, put into amber glass ampules which are not sealed but are placed in separate test tubes which are rendered anaerobic by the use of pyrogalllic acid and caustic potash solution, similar to the method used for bacteriological cultures. These are stored in the ice box, when they are to be used, the emulsion is made up to the proper dilution with physiological salt solution to which 0.5 per cent phenol has been added. This solution is then placed in ampules for the individual doses and dispensed in the usual manner."

**MENACE OF THE UNVACCINATED.**—Victor G. Heiser, *M. D. Journal A. M. A.*, Sept. 29, 1923.

The anti-vaccinationists of the past have contributed largely to the death rate from smallpox. We have the future before us. Shall we allow a few fanatics with their unproved allegations, to spread disfiguration, blindness and death to innocent victims? Smallpox is increasing in virulence and was 75 times as dangerous in 1922 as in 1920. Immigrants are a huge menace.

Denver, Colorado, has a large unvaccinated population. From September to November 1922, 123 persons died of smallpox; 100 of these had never been vaccinated and the other 13 had not been vaccinated for 20 years. Denver also furnished additional evidence of the virulence of the disease.

Recently in southern California, chiropractors were responsible for 15 cases and one chiro died of the disease. In Denver a chiro who publicly attacked vaccination contracted smallpox and fled to Biloxi, Mississippi, where he died from the disease after exposing many others and starting an epidemic from which several died. In Kansas City during a serious outbreak of smallpox, all of the physicians except one eclectic, who had not been vaccinated, escaped the disease.

Philippines, prior to occupation by United States, had 40,000 deaths a year from smallpox. The disease was brought under control by vaccination. Later a large number of children were allowed to go unvaccinated and in 1918 50,000 deaths occurred. The epidemic was only checked by effective vaccination in advance of the disease.

Bugaria, Russia, Porto Rico and Cuba have a similar history.

Early historical records show that much of the world's blindness was caused by smallpox. In countries in which the disease goes unchecked, this is still painfully evident. In such countries as the United States, England, and Norway and Sweden where effective vaccination has been carried on, blindness from smallpox has been reduced

to very small proportions. In the United States it is rare to see a case. If the disease is allowed to gain a foothold here again we may witness conditions of blindness such as exist in Russia today.

In the history of physicians, nurses and attendants, there is no history of anyone dying who had been vaccinated. If all children were successfully vaccinated, epidemics of smallpox would probably never occur. At present there is an increasing lack of vaccination among school children and we as physicians need to get behind the Boards of Health and bring pressure to bear toward education so that our legislators may pass protective laws in regard to vaccination.

There is practically no risk in the use of the modern vaccines and there is no justification for a condition that will permit fifty times as much smallpox in one state as in another, as the disease is within our control.

**SMALLPOX AND VACCINATION.**—J. P. Leake, M.D. and John M. Force, M.D., Surgeon and Special Expert, respectively, of U. S. Public Health Service, Washington, D. C., *Journal A. M. A.*, Sept. 29, 1923.

This article is like that of Dr. Heiser, a plea for more effective vaccination. And the authors say that every practitioner should familiarize themselves with the disease in all of its manifestations. There have been many epidemics which were diagnosed by many different names but experts claim that all of the new terms such as alastrin, kaffir milk pox, etc., are but mild cases of true smallpox and that great harm is done because they are not truly diagnosed and vaccinated against. Measures which are completely successful against the mild types are not completely successful against the virulent types. The duration of immunity is shorter in some persons than in others and negroes have a very short duration of immunity. It is generally safe to say that if everyone were vaccinated in early childhood and then every seven to fourteen years thereafter, it would practically control epidemics. If virulent smallpox breaks out in a community, people should be re-vaccinated with potent virus even though they were vaccinated a year before because of the difference in time of immunity for different individuals.

**EYE, EAR, NOSE AND THROAT**

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**CHRONIC SUPPURATIVE OTITIS MEDIA.**—Bozer, H. E. *Ann. Otol., Rhinol., & Laryngol.*, 1923, xxxii, 277.

Bozer studied the results in the treatment of 190 cases of chronic suppurative otitis media to determine the value of local treatment. The cases were classified into four groups.

The method of treatment was the so-called dry treatment, using local applications of alcohol, antiseptics and caustics. All of the treatment was carried out in the office, the patient not being permitted to use any form of treatment at home.

The duration of the treatment averaged about four weeks. The severe or bad types in which

marked bone destruction was noticed when first examined frequently responded to treatment within a relatively short period.

The author thinks that many so-called chronic ears should be handled by the very conservative method of local treatment. Should such a method fail a radical mastoid may then be considered. Many cases of discharging ears can be successfully handled by the conservative method and thereby avoid the hurried mastoid.

Care in blowing the nose is essential in keeping the ear dry after being treated.

#### ONE HUNDRED CASES OF LARYNGEAL GROWTHS REMOVED BY INDIRECT LARYNGOSCOPY.—Wylie, A. *Internat. J. Surg.*, 1923, xxxvi, 244.

The author urges the removal of laryngeal growths by the indirect method and reports 100 cases. By this method the growth is removed with very little discomfort to the patient and without injury to the larynx. The operation can be performed in the office.

Several days prior to the operation, small doses of potassium bromide should be administered to relieve mental strain and half hour before operation 1-100 grain of atropin should be given to lessen the secretion.

Two minutes before the operation, the pharynx and larynx are sprayed with a 10 per cent freshly prepared solution of cocaine.

MacKenzie's forceps are of value in most cases. Grant's forceps are especially adapted for tumors on the edge of the cords protruding into the lumen of the larynx. The author frequently uses the universal forceps consisting of a Krause cutting blade on a universal handle.

#### COMPLICATIONS OF PARANASAL SINUS DISEASE IN INFANTS AND YOUNG CHILDREN.—Dean, L. W. *Ann. Otol., Rhinol., & Laryngol.* 1923, xxxii, 285.

The failure to recognize early nasal infections in children may lead to severe infections of the sinus' and complications leading to severe deformities may occur.

Bronchitis is a common result of paranasal sinus disease in infants and very young children. Arthritis, a frequent and serious complication, clears up if the sinus infection is recognized early and treated. Asthma and pneumonia are frequently the result of some sinus infection in children.

Headache is characteristic of sinus disease in young children. The headache is usually frontal and attributed by the parents to eye strain. Other symptoms of sinus disease are nasal stoppage and a feeling of fullness in the head.

Gastro-intestinal disturbance is an important complication and should not be overlooked. It is usually so severe that it is thought to be the primary trouble. It is questionable whether this condition is due to swallowing the nasal discharge or to the elimination of bacterial products through the gastro-intestinal tract.

#### THE REMOVAL OF TONSILS.—B. R. Shurley. *J. Am. M. Ass.*, lxxxi, 1923, 800.

In spite of the years of research, the physiologic function of the tonsil remains a study and a choice of theories. The school of experience has

taught that certain methods and anaesthetics are dangerous or failures.

The roentgen-ray method of treating tonsils will not supplant the safe operative methods but may find a limited field of usefulness in the class of cases described as bad operative risks.

Tonsillectomy is a major and hospital operation.

Ether is the choice of anaesthesia for children and the reclining position lessens danger.

The Sluder enucleation method is best for children and the tonsil knife or scissors is preferable in adults.

In adults, procain, 0.5 per cent, the sitting position and dissection are most advantageous.

#### ARSPHENAMIN TREATMENT OF SPIROCHAETIC GINGIVITIS.—Kolmer, J. A. *Am. J. Clin. Med.*, 1923, xxx, 243.

The author has found that the local application of a 1 per cent solution of arspenamin in the treatment of spirochaetic gingivitis, pyorrhea alveolaris or Riggs' disease is very efficient. Neoarsphenamin should be used in a 2 per cent solution. The arspenamin solution should be the usual alkaline solution.

The drug is best applied by means of a syringe using one subic centimeter of either solution. Six to ten daily treatments are usually sufficient. If bacterial activity is suspected, iodine, mercuraphen, or silver solutions should be used in conjunction with the arsenical preparations. A solution consisting of a mixture of equal parts of a 1 per cent solution of arspenamin and a 1:1000 solution of mercuraphen is advised for treating the double infections.

### GENERAL MEDICINE

Edited by Wann Langston, M. D.

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#### FOOD ALLERGY AS A CAUSE OF ILLNESS.—W. W. Duke, *J. A. M. A.*, Sept. 15, 1923.

A rather large proportion of persons are born with a constitution which makes it possible for them to become hypersensitive to foreign substances. This constitution is hereditary as a positive history can be obtained in one or both parents in about fifty percent of cases. Once sensitive, a person is likely to react in characteristic way whenever he comes in intimate contact with the substances to which he is sensitive. The condition is common and affects about ten percent of all persons.

Foods which sensitize human beings may be either protein or non protein, organic or inorganic. Some foods, such as sea foods, have a greater faculty for sensitizing than others such as commonly eaten, meats, fruits or vegetables. Sensitiveness to foreign matter is often very specific. Persons are frequently sensitive to a protien common to several foods which are related biologically. Specificity is more striking in the case of sensitiveness to air-carried allergens than it is in the case of sensitiveness of foods.

A patient is not made ill by all the foods to which he is actually sensitive and to which he gives skin tests. The time at which reactions occur varies in different patients, although it may be remarkably constant in a given case. The

degree to which patients react to food is remarkably constant in some persons and varies greatly in others.

When a person is sensitive to food, illness may be caused in five important ways: (1) A reaction, confined to the gastro-intestinal tract may occur as a result of direct contact between the gastro-intestinal mucous membrane and the product to which it is sensitive. (2) Disorder in the gastro-intestinal tract or in distant organs occurs as part of a general reaction to a food after it has been absorbed and distributed by the blood. (3) When an organ is in an irritable state as a result of reaction, it is unduly disturbed by mechanical, chemical or thermic irritants, by functional activity, by abnormal reflexes, and by other disease that may coexist. (4) Illness in no wise related to allergy is occasionally made worse by reaction to foods. (5) Definite organic disease may occur as a result of an acute or chronic state of reaction.

Symptoms may be divided into two classes, those due to direct contact between a food and the gastro-intestinal mucus membrane, and those which occur as a part of a general reaction. Reactions may be due to common or uncommon articles of diet. The gastro-intestinal, ocular, nasal, pharyngeal, bronchial and cutaneous symptoms can occur either as a result of direct contact with an offending substance or as part of a general reaction. The neuralgic symptoms, joint symptoms, bladder symptoms, hypotension, eosinophilia, hives and angioneurotic edema can occur under ordinary conditions only as part of a general reaction caused by an allergen which has been distributed by the blood. The abdominal symptoms are abdominal pain, which may be either steady or griping. Other alimentary symptoms of interest are dyspepsia, nausea, vomiting, bloating, diarrhea and mucous colitis, acute or chronic.

Treatment may be by (1) avoidance of the offending food; (2) specific protein treatment; (3) non-specific protein treatment, and (4) symptomatic treatment with epinephren and atropin—useful in emergencies and for temporary relief.

#### FOCAL INFECTIONS IN RELATION TO SYSTEMIC DISEASES.—W. G. Thompson, M. D., Boston, M. S. J., August 23, 1923.

Owing to many difficulties, it is impossible as yet to give statistics concerning the relative frequency of systemic symptoms in relation to the different sources of focal infections. The author's impression is that the tonsils and teeth are responsible for the great majority, with the emphasis upon the teeth. The nasal sinuses, when chronically infected, are a menace for many respiratory diseases but less liable to affect the heart or cause arthritis. Prostatic abscess also may give rise to quite remote symptoms, including lesions of the joints.

The most common of all local infections are a variety of nerve, muscle and joint, ranging from neuralgia, neuritis, sciatics and myositis, to arthritis, synovitis, bursitis and possibly the so-called arthritis deformans. It is most desirable in all such cases to carefully examine the mouth and wherever extensive pyorrhea, decayed stumps of teeth and capped-over teeth are found to refer the patient for dental treatment, and insist further upon having X-Ray pictures sent back by the dentist. This often reveals much focal infection. In many instances, long standing neuritis or sci-

atica, previously rebellious to medicinal remedies, have entirely disappeared with no treatment other than cleaning out a hidden pus pocket or scraping out an area of necrotic bone.

Another less common but more serious type of cases are those in which a degree of anemia ensues, with or without a generalized septicemia. In these instances various types of streptococci and staphylococci may be demonstrated and particularly the viridans.

Another different group of focal infections is that in which the circulation becomes involved with the exclusion of other symptoms. This is very noticeable in the aged who are neglectful of mouth hygiene. Here cardiac arrhythmia and general enfeeblement of the circulation may sometimes entirely disappear when an extensive pyorrhea or a series of decayed tooth roots are treated antiseptically.

The influence of focal infection upon psychosis is interesting. It is a matter of increasing experience that attention to hygiene of the tonsils and teeth often has a decided and immediate effect in improving the mental state in a marked degree. There is a possibility that the improvement may result from betterment of digestion and lessening nonseptic toxemia, rather than from elimination of bacterial focal infection. Psychotic patients usually neglect the care of their mouths. From such mouths, both hemolytic and non-hemolytic, bacterial strains frequently may be derived from both tonsils and teeth. Secondary infections of the alimentary canal may arise from swallowing these types of bacteria developing in the mouth, setting up new foci of infection in the digestive organs.

With regard to the treatment of focal infections there are several features which should be emphasized. Diligent search should be made for the original focus, bearing in mind that there may be more than one sure source of infection present. Mouth infection frequently results in various digestive disorders. In such cases attention to digestion and intestinal asepsis is important, the latter to be obtained through the so-called intestinal antiseptics, such as creosote, salol, beta-naphthol, etc., and especially through colonic irrigation. In cases in which an extreme degree of anaemic and other symptoms of profound general sepsis have resulted, blood transfusion should be practiced and with exceeding expert procedure. Another means of treatment is through the administration of autogenous vaccines, where material is obtainable from which to make them. This is again an expert procedure and often fails through lack of skill in obtaining and making cultures.

#### AN ESTIMATE OF THE INFORMATION DERIVED FROM THE USE OF TESTS FOR RENAL FUNCTION.—W. T. Longcope, Boston, M. & S. J., August 23, 1923.

The methods that have been developed to estimate the functional activity of the kidney depend essentially upon four types of technical procedure.

(1) The determination of the rate of excretion in the urine of certain known chemical substances which are injected beneath the skin or taken by mouth. The substances that have been most widely employed are phenolsulphonaphthalein, lactose and potassium iodide. The use of potassium iodide

and lactose has now largely been abandoned. The phenolsulphonephthalein test of Towntree and Gerathy is very widely used.

(2) The determination of the specific gravity of the urine, together with the sodium chloride and nitrogen content in specimens collected at two-hour intervals during the day with the patient on a special diet. At night one ten hour specimen is collected and analyzed, a comparison of the day and night amount is of value. This renal test meal, devised by Schlayer and Hedinger and modified for use in this country by Mosenthal and Christian, is of much value as a test for early renal disturbance.

(3) The determination of the changes in the amount of normal metabolic products and salts in the blood, including uric acid, urea, non protein nitrogen, creatinine, glucose, chlorides, inorganic phosphates and sulphates. The methods of blood analysis devised and developed by Marshal, Van Slyke, Folin and Wu, Deneis, Meyer and Kramer, have made available a technique for study of the chemical constituents of the blood which has added an enormous amount of detailed information concerning the changes that take place in the blood chemistry during disease.

(4) The determination of the ratio between the concentration of such metabolic products as urea in the blood and the rate of its excretion in the urine. The original technique and formula devised by Ambard for the determination of the index of urea excretion was later modified by McLean in this country and was for some time employed quite extensively.

Of the four types of tests, the ones that have been most widely used are first, an estimation of the phthalein excretion; second, the renal test meal, and third, the determination of the concentration of the chemical constituents of the blood. Of these the most important are urea, non protein, nitrogen, uric acid, creatinine and the CO<sub>2</sub> combining power of the blood, which excluding other causes for acidosis, gives an indirect measure of the phosphate. The normal function of the kidney may be disturbed in other conditions than nephritis, such as chronic passive congestion that comes from cardiac failure. If the chronic passive congestion is combined with a low blood pressure, the conditions are present that disturb the renal secretion. The oliguria, albuminuria, and even hematuria of chronic passive congestion are familiar. Under these conditions it has been found that the excretion of phthalein may be much diminished and that the non protein nitrogen of urea of the blood may be somewhat elevated above normal. At the same time the specific gravity in the two hour test may be fixed at a high level and the excretion of chlorides diminished with the restitution of the circulation, the congestion is relieved and the renal function in uncomplicated cases returns to normal.

In pernicious anemia, the kidney function as measured by one of these tests may be definitely impaired. The Mosenthal findings may be identical with those in chronic nephritis and there may not be an impairment of the excretion of phthalein.

In the acute forms of nephritis the tests are not needed for diagnosis. In one group with anasarca, low blood pressure and marked albuminuria, all tests for renal function may be normal save for oliguria and marked retention of chlorides. In another type of acute nephritis there may be notable and rapid changes particularly in the blood

chemistry. The acute onset may or may not be attended with oedema, but is often associated with an increase in blood pressure, albuminuria and haematuria. A study of renal functions may be of value in prognosis in cases of hypertensive nephritis. In early stages of the disease, the blood pressure is high, the uric acid, urea and non-protein nitrogen of the blood may rise to highly abnormal and even the acid phosphates may increase and cause varying degrees of acidosis, while the urine may show fixation of specific gravity at a high level. In spite of these abnormalities the phenolsulphonephthalein may be excreted in perfectly normal quantities.

The functional tests are also of value in giving information concerning the progress from an acute, through a sub-acute stage of the disease to a chronic phase, that may soon terminate fatally. One of the most useful purposes of these tests is to detect the early changes in secretory activities of the kidney in progressive chronic nephritis, which is satisfactorily done by the determination of the ability of the kidney to concentrate the salts and waste products which it excretes.

## TUBERCULOSIS

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### VACCINES IN THE TREATMENT OF THE SECONDARY INFECTIONS IN PULMONARY TUBERCULOSIS.—Cocke, Southern Medical Journal, Oct. 1923.

In spite of the many disappointments of the past, enthusiastic workers are still hopeful of finding a specific for pulmonary tuberculosis. Although no one has been able to definitely prove the full extent, danger and damage of a mixed or secondary infection in tuberculosis, all workers are more or less of the opinion that such an infection has a greater or lesser importance. One point of agreement is that with the progress of the disease this infection is always present in increasing effect. However, it is generally accepted that practically all the symptoms and pathological changes commonly associated with secondary infections may occur as a result of tuberculous infection alone; and it is definitely known that these secondary organisms are not necessary to the production of pulmonary tuberculosis.

Pettit and Brown and their co-workers have shown that with the progress of the disease there is also an increasing incidence of secondary infection in the blood stream, but have not been able to determine its importance in symptomatology and pathology. Patterson is inclined to attribute little, if any, influence to the secondary infection in the progress of tuberculosis and expects very little help from the use of autogenous vaccines. Pottinger, while at one time a staunch believer in mixed infection being an important process in all advanced cases of pulmonary tuberculosis, is gradually becoming of the opinion that associated bacteria are comparatively an unimportant part of the pathology of tuberculosis. Fishberg is inclined to the belief that while mixed infections are very frequent in tuberculosis, the contaminating micro-organisms are not responsible for most of the symptoms of the disease. Corper and Enright concluded after the study of direct cultures, inoculation experiments and the saliva of the nor-

mal individual that the organisms in the sputum in pulmonary tuberculosis ordinarily play an important part in the disease. While Norris and Landis state; It is the present day belief that the formation of a cavity is due in a large part to the presence of secondary infection with various pus-producing organisms. These organisms produce a liquifying necrosis of the caseous areas and thus hasten their break down. Brown and his co-workers state that while they believe they can prove the occurrence of secondary invasion by various organisms, they have not as yet been able to be sure that such secondary infections play constantly a part in the progress of pulmonary tuberculosis.

So after a careful study of the works of these men, we are still uncertain as to the importance of secondary infections in pulmonary tuberculosis and are therefore confronted by the problem of making a vaccine which will contain the invading organisms in the proper proportion to effect immune response and hence benefit the patient and be of no danger to him; so it would seem that we are hardly justified in the use of autogenous vaccines unless we believe with some that the success of vaccine therapy is due to the non-specific protein reaction, and that immunization must not of necessity be strictly specific.

Weaver points out that streptococcus vaccines should always be autogenous inasmuch as the various strains of streptococci differ among themselves in essential immunological peculiarities. A polyvalent streptococcal vaccine against all types of streptococci would of necessity have to contain so many strains as to make it practically valueless, because this multiplication of strains would necessarily so reduce the content of the essential one as to render it therapeutically inert.

The author is of the opinion that stock vaccines should only be used when it is impossible to secure autogenous vaccines.

Different workers report the use of autogenous vaccines with varying degrees of success, but it is the consensus of opinion that they should be used in combating secondary infections in pulmonary tuberculosis only in such cases as have failed to respond to the more conservative measures, and then they are to be used with caution.

#### LOWER LOBE PULMONARY TUBERCULOSIS. —Wm. S. Middleton, American Review of Tuberculosis, July, 1923.

The author presents four cases of pulmonary tuberculosis in which the significant physical signs were in the basal lobes. In none of these cases were there signs of pathological changes in the apices on physical examination. Tubercle bacilli were found in the sputum in all cases.

These cases are presented in order to emphasize the dangers of generalization in the field of diagnosis. He concludes that while the arguments for a regular order of tuberculous involvement in the lung are based on the observation of thousands of cases, there are exceptions where evident signs of pulmonary tuberculosis are overwhelmingly or entirely basal, and opposing the rule, lower lobe involvement may be much more advanced than the upper lobe forms. Thus persistence in inflexible rules of diagnosis may lead to serious errors in diagnosis and prognosis.

#### THE WILDBOLZ AUTO-URINE TEST FOR ACTIVITY IN TUBERCULOSIS.—John H. Korn, American Review of Tuberculosis, July, 1923.

Wildbolz assumes as the basis for his test three things, (1) that there are present split products of tubercle bacilli in the urine of those harboring an active tuberculous focus in the body; (2) that these products are responsible for a specific reaction of infiltration and redness when the urine is injected intracutaneously in a person allergic to tuberculin; and (3) that when the disease becomes inactive, decomposition products of the bacilli cease being excreted in the urine and the auto-urine test in consequence becomes negative.

The author's series of tests was carefully done, the preparation of the urine being supervised and the injections and readings being made by the same person throughout. Wildbolz's technique was used in 49 cases while Bergen's was used in the other 32. Of the 33 cases considered actively tuberculous, 29 agreed with Wildbolz's results and 4 disagreed. Of the 48 considered non-tuberculous, 31 gave negative and 17 positive results. Thus 74 per cent agreed with and 26 per cent disagreed with Wildbolz's findings.

Certain theoretical considerations are presented which lead the author to question the specificity of the test. In its present form it is not practically helpful as it requires a considerable amount of apparatus and is time consuming, with great chances for technical error. It is also unsafe in doubtful cases to use it as a criterion of activity.

#### THE WILDBOLZ AUTO-URINE REACTION.—J. M. Haymon, Jr. American Review of Tuberculosis, July 1923.

The technique used, that of Gibson and Carroll, which includes some slight modifications of Wildbolz's original method, is described in detail. The series of 75 cases consisted of 38 cases of proved tuberculosis, 7 doubtful and 30 supposedly non-tuberculous patients as controls. 29 or 76.3 per cent of the 38 proved tuberculous patients gave a positive reaction, 3 or 7.8 per cent a doubtfully positive and 6 or 15.8 per cent a negative. Of the 30 control cases, 23 or 76.7 per cent gave a negative test, 6 or 20 per cent a doubtful and 1 or 3.3 per cent a positive.

Haymon believes that a definitely positive result properly controlled is indicative of active tuberculosis, that a negative test is of less value unless repeated and that doubtful reactions must be interpreted with great care and are of little diagnostic value.

The test, while theoretically sound, is beset with so many sources of error on account of the numerous details and difficulties in preparing the urine for the test and interpretation of reactions, that little reliance can be placed upon it at present. It is worthy of further trial and an attempt should be made to devise a simpler and more reliable technique.

#### SO-CALLED SELECTIVE COLLAPSE IN ARTIFICIAL PNEUMOTHORAX.—Hennell and Stivelman, American Review of Tuberculosis, July 1923.

By the term selective collapse is meant the tendency of the injected air to accumulate about the diseased part of the lung as if selectively collaps-

ing it, and leaving the healthy portions relatively unaffected.

This is due to the fact that there is an early diminution in compressibility and elasticity in diseased lung tissue. For this reason the diseased portion while being less compressible than the surrounding normal tissue, will respond less readily and completely on absorption of the induced pneumothorax.

After a study of a series of cases the authors state their opinion that the involved portions of the lung can be fairly well collapsed with all the resultant good effects, with pressure so low as to interfere little, if any, with the functions of the surrounding normal tissue.

By this method induced pneumothorax can be employed in the treatment of a much larger group of cases than would be possible were a complete collapse to be used. It also gives more perfect control over the pneumothorax with reference to ultimate re-expansion of the lung, with the possibility of avoiding chest deformity and the elimination of the danger of reactivating dormant foci. There remains, however, a certain group of cases with a fixed mediastinum tendency to pleural obliteration, extensive disease in all lobes of the treated lung and active thick-walled cavities, where the use of very high positive pressure is necessary.

#### THE PRIMARY COMPLEX IN HUMAN TUBERCULOSIS AND ITS SIGNIFICANCE.—Anton Ghon, *American Review of Tuberculosis*.

By the term complex is meant that "definitely circumscribed" picture consisting of the primary focus of infection and the changes in the regional lymph nodes. According to Parrot every primary lung infection shows itself in the regional lymph nodes. These changes follow in their topography certain laws which correspond with the laws holding good for the lymph drainage under normal conditions, and may be present in varying quantities. This complex is present even in primary extra-pulmonary tuberculous infections, follows the same laws and shows the same anatomic changes.

These facts give valuable points to the pathologist and clinician in determining the portal of entry. The primary complex also constitutes the determining factor for the immunological relations of the body since the longer the primary infection remains a localized process the slower it extends to the regional lymph system and later gives rise to generalization.

#### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l. Bank Bldg. Oklahoma City

#### 1. ORTHOPAEDIC PRINCIPLES.—"Menders of the Maimed," by Arthur Keith, M.D., F.R.C.S., L.L.D.

A book published in London in 1919, devoted to the history and development of Anatomical and Physiological Principles which underlie the treatment of injuries of muscles, nerves, bones and joints. His discourse assumes that of a historian and biographer, relating the developing of Orthopaedic surgery to the personality of each great student of Medicine as

his life and scientific investigations brought to light some new angle of importance.

Starting with John Hunter he connects each school of scientific investigations relating their influence on each other, finally presenting American leaders of the past and present.

It is a book that every surgeon who does extremity surgery at all, should read. It is thought that abstracts from the book will be of interest in this section and will appear for the next few months under the heading of "Orthopaedic Principles."

#### 2. HIP JOINT.—Flattened Hip Socket and its Sequelae. Dr. Munk Jensen's *Journal Bone and Joint Surgery*, July 1923. Vol. V., No. 3-528.

This article is a further discussion of Dr. Jensen's theory regarding so-called Perthes Disease of the hip joint. By means of diagrammatic reasoning, he further explains how the epiphyseal head of the femur becomes flattened, the femoral neck becomes thickened, and the final picture of the condition arises as the result of mechanical disturbances through the force of gravity. He admits that injury, or intercurrent disease, which other authors claim is the sole cause, may have its influences in hastening its process.

His theory is, that if the acetabulum is flattened, pressure on the epiphyseal head of the femur causes it to flatten out and become displaced, giving it the characteristic appearance. He reviews some statements that he has made previously regarding the effect of enfeeblement upon bone growth and also the part muscular stress plays in aiding the force of gravity. Many beautiful photos accompany the article and are worthy of study.

#### 3. FRACTURE CLAVICLE.—W. L. Bell, *Annals of Surgery*, Nov. 1922.

In the treatment of fracture of the clavicle, the use of plaster paris has given way to adhesive plaster and splints. Dr. Bell describes a unique method which seems practical. He makes a circular cast on the chest from axilla to waist line. Then the arm is enclosed in plaster to the elbow. On the following day the arm and shoulder carrying the outer fragment of the clavicle is extended, while making counterpressure on the chest, outward, upward, and backward. The gap is covered by plaster and held firmly until set.

#### 4. INFANTILE PARALYSIS.—Hamstring Transplantation for Quadriceps Paralysis. Paul C. Colona. *New York Journal Bone and Joint Surgery*, July 1923. Vol. V. No. 3.

He makes an analysis of 101 cases of hamstring transplantation operated at the Hospital for Ruptured and Crippled, New York. He tabulates end results as he found them in 24 cases personally examined. The technique employed in these cases was that whereby the biceps freed from its insertion and re-inserted into the patella to replace the paralyzed quadriceps, as described and employed by Dr. Royal Whitman of New York.

He concludes that satisfactory functional results are the rule. The biceps is better to use than the inner hamstring. He warns that accompanying deformity should be corrected before transplantation, and that negative results are apt to follow if the extensors of the hip are also paralyzed.

## CURRENT COMMENT

By The Editor,  
Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, whatever or wherever it may be. Contributions are invited from our members.

### CAN THE LEAGUE DO ANYTHING?

"Hints have been thrown out that Great Britain, failing to achieve an accord among the Allies, might attempt to bring the whole question of reparations and a settlement with Germany before the League of Nations. If Great Britain does not do so, one of the neutral nations is practically certain to make the attempt, as Sweden did this spring. France would probably oppose any intervention by the League; but it is at least open to question whether France would stand out absolutely against the majority opinion of the world which any decision by the League would represent. As the Council and the Assembly meet, the League will face the greatest test it has yet had as to what it can do to cure the malady of war, now threatening the very life of European civilization. Many Americans are profoundly and sincerely distrustful of the League, skeptical of its powers. But it is evident that our ideas of international arbitration of the reparations problem or a general accord to guarantee security and limit fighting strength, such as the Washington Conference achieved, have little chance of acceptance in Europe today. The League of Nations remains as the only existing agency for mediation.

"Whatever else may be said for or against it, the League represents the one organized endeavor for rational united action in a time of chaotic and menacing struggle. Americans will watch with keener interest than ever before what the League does—particularly with reference to our pressing concern over what our own international policy should be. It may prove that President Harding's step toward restatement of his policy, in his final undelivered address, and Lord Robert Cecil's plan for mutual guarantees and limitation of armament, which would considerably modify Article X of the League, will point the way toward co-operation in doing America's full part to promote world peace."—Our World, Sept. 23.

THE INDIAN PROBLEM, according to Honorable Clyde M. Kelly, Member of Congress, Thirtieth District, Pennsylvania, is everything except what bureaucratic Washington says it is. Quoting statements in part from Mr. Kelly, we find he has this to say:

#### Bureau Injures Indian

"I deny that this \$13,000,000 appropriation benefits the Indians. I propose to prove that to the satisfaction of any person save those who may profit from the present bureau system. I believe that the Indian would be better off today if the Indian Bureau had been abolished twenty-five years ago.

Here are 300,000 human beings of a race which for ninety years has been under complete control of the Indian Bureau. During that time they have been forcibly driven off their homelands of the Eastern States and herded into reservations west of the Mississippi. These reservations whose bounds were laid out in sacred treaties have been cut in two, oftentimes without a word to the Indians concerned. Not a treaty made by the

United States Government with the Indians has been kept and these acts of faithlessness have either been initiated or approved by the Indian Bureau—this alleged protector of a helpless people!"

The Indian reservations, diminished even as they have been, have become very valuable. The building up of the West has added to the value of every acre. On some reservations great oil deposits have been discovered and minerals of various kinds have been found. There are valuable forests on others.

"Not because of the Indian Bureau but because of the national growth of America, and in spite of the Indian Bureau, the lands still left to the Indians became valuable.

In all, the 50,000 and more families under the control of the Indian Bureau have lands and other property worth a billion dollars today.

That means that every Indian family possesses wealth to the extent of \$15,000 and more. It means an average income of \$900 for every Indian family, which is more than the average income for all the families of the United States.

These Indians, possessors of this great wealth, are starving for lack of the necessities of life. Economically independent, the Indian is still kept dangling to a pauperizing, degrading bureau system. Does it benefit the Indian to have bureau agents dissipate his property while they spend millions of the public tax funds as well?

It is loudly declared that the great tax appropriations must continue because it would be cruel and brutal to reverse our policy of ninety years. Self-styled "friends of the Indians" cry out that the Indians do not want freedom and its responsibilities. "Oh, no," they exclaim, "The Indians are begging to be allowed to remain under the sheltering wings of the Indian Bureau."

It has cost millions of American dollars to build up that falsehood and foist it upon the American people. The officials of the Indian Bureau know that statement is not true. They know the tricks and schemes and fox-like watchfulness necessary to give it even a semblance of reality. They fight to death any plan to settle the question by fair vote. They oppose any investigation which would show that the wings of the bureau give shelter to the Indians just as the hawk's wings shelter the partridge.

The desires of the American Indians, wherever a free opportunity is given, have always been shown to favor freedom and to oppose bureaucratic control. This fact is so well known to the Indian Bureau that it has for years arrogated to itself the right to supervise and control the election of council members and tribal delegates."

"Japan has retired 850 officers, including seven generals, since August 1922. The Japanese Government has announced that it will shortly discharge from the service 1,371 additional officers, including four generals, and thirty-three major generals. Many retired Officers have entered the Department of Economics of the Imperial University to qualify for civilian occupations."—The Dearborn Independent, July 28.

"Alvin M. Owsley, national commander of the American Legion, says, 'It will take five years to write a sensible law to govern immigration and until that time the United States should bar those who are coming here seeking to avoid the consequences of a war which they brought upon themselves.'—The Dearborn Independent, July 28.

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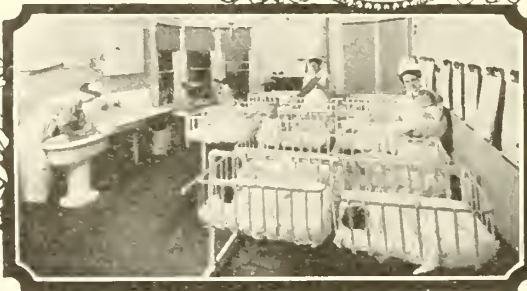





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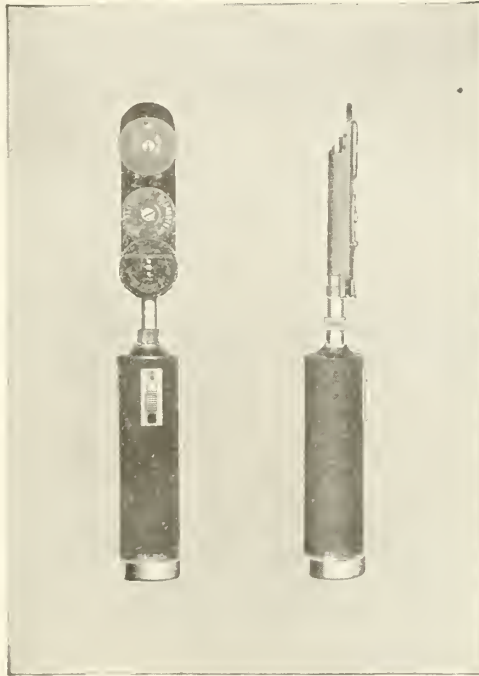


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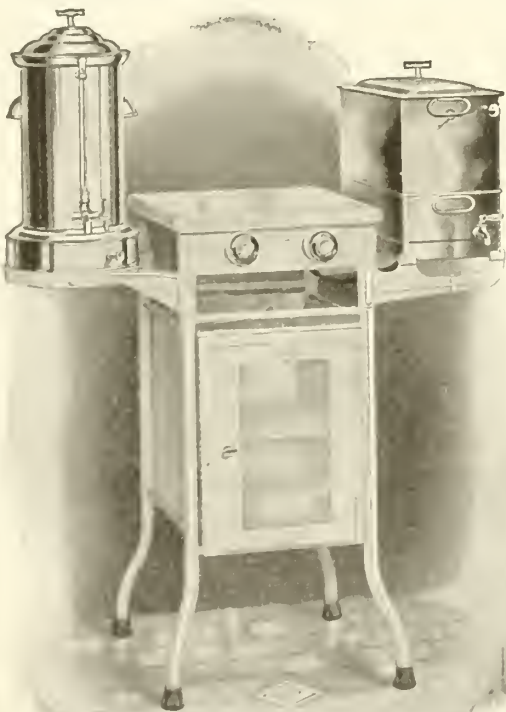
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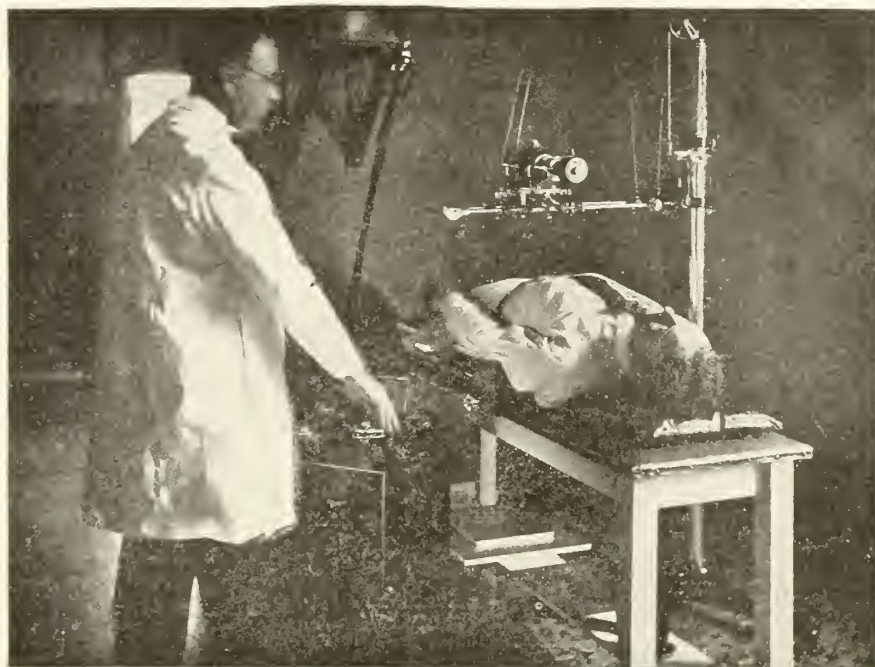
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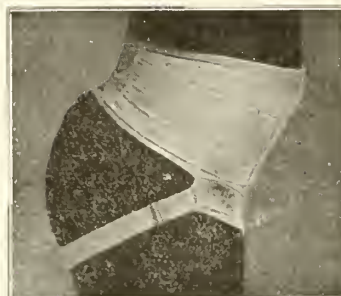
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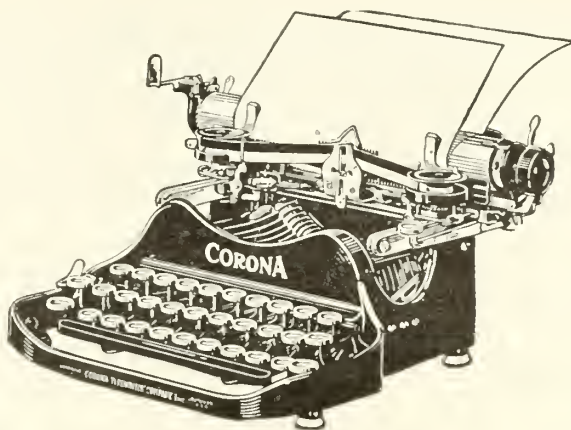
The test demonstrates the tonic influence of ergot on the smaller vessels. It consists in the administration of the material under test to cocks of the white Leghorn species. The activity of the ergot can be measured with a fair degree of accuracy by observing the effect of graded dilutions on the cock's comb. This effect is a darkening or blackening of the comb, a result of blocking of the smaller blood-vessels by the ergot in the blood.

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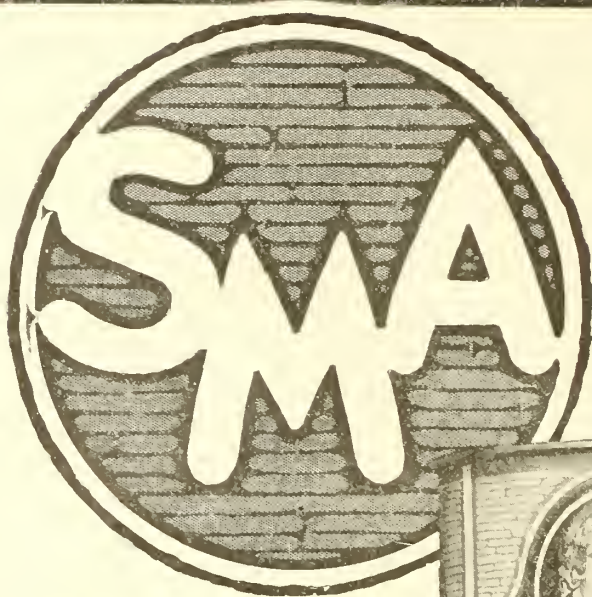
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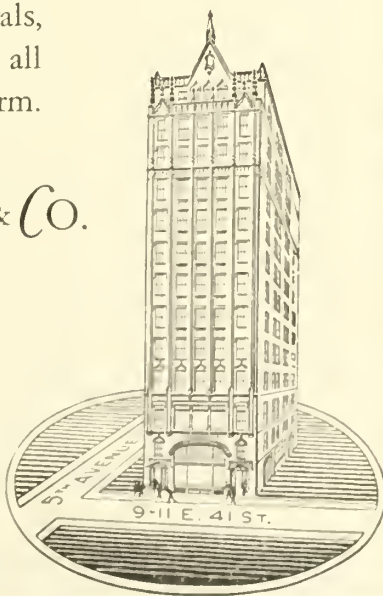
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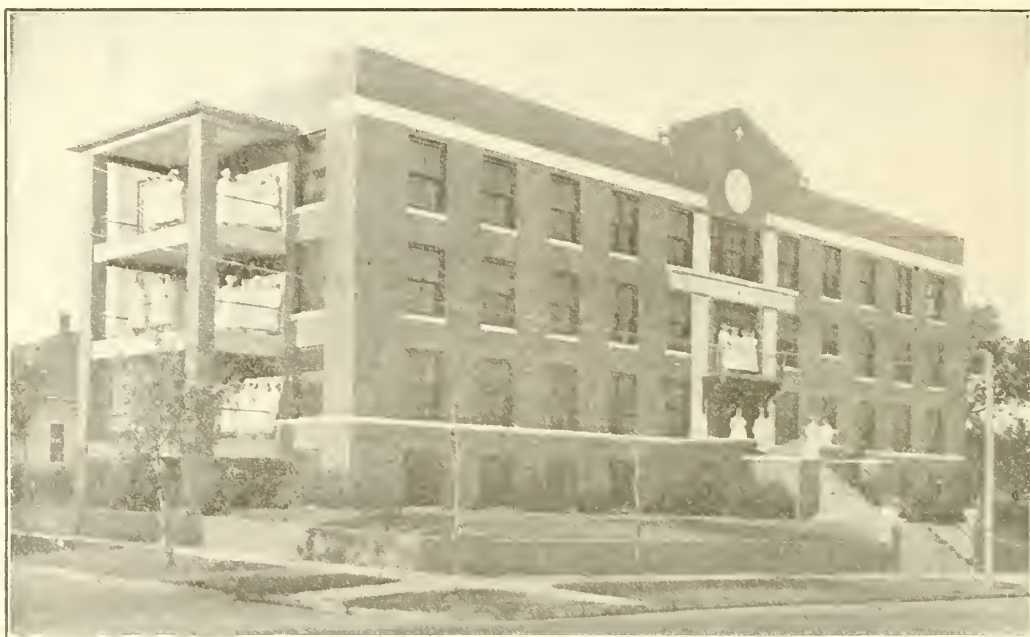
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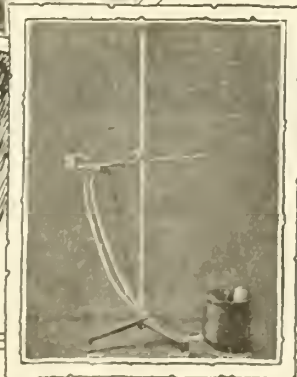
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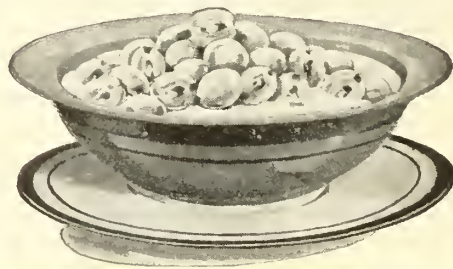
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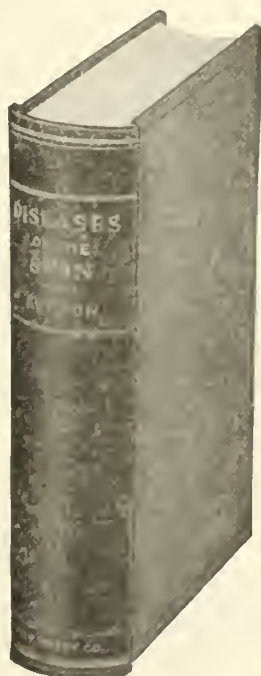
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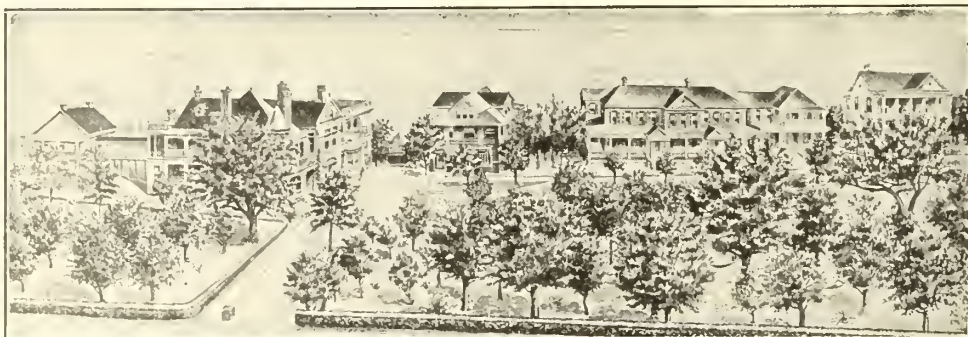
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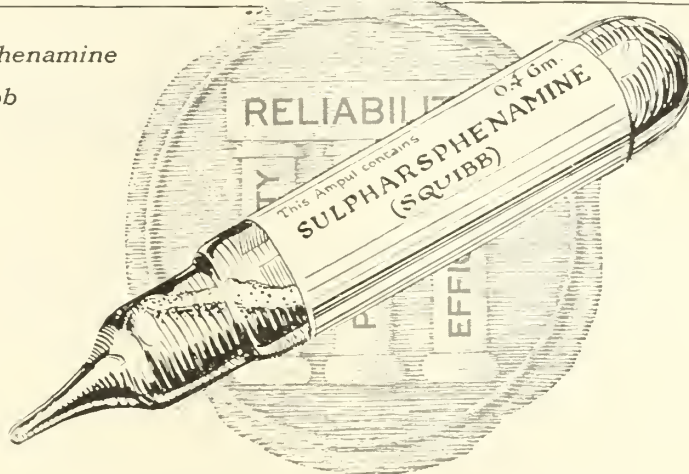
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# THE JOURNAL

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### CERTAIN PULMONARY AND PLEURAL SEQUELAE OF RESPIRATORY AND OTHER INFECTIONS\*

WALTER BAUMGARTEN, M.D.,  
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The clinical material that has come under observation in the past six months has contained an unusually large proportion of secondary pulmonary and pleural complications. They have not all been recent in origin and have not all followed primary respiratory disturbances. One group of cases has followed the acute upper respiratory infections of the past year, which seem to have been particularly prone to be followed by complications of all sorts. A second group has followed tonsillectomy and a third has followed severe infections. Both these last are undoubtedly embolic in character arising from infected material transported from the site of operation or of primary infection.

Two types of sequelae have presented themselves:

(1) The first represent areas of infiltration of the lung tissue ranging in degree from more or less dense areas of infection to definite abscess formation with elastic tissue in the sputum.

(2) The second type consists of pleural effusions, not purulent.

I wish to present briefly the main feature of illustrative cases, and to visualize the location and extent of the lesions in each case by lantern slides of X-ray plates of the chest.

*Case I: Mrs. W. C. McB.*—Sixty years old, had had a low grade, persistent nose and pharynx infection throughout the summer of 1922. In September this became materially worse, extending to the trachea, followed by a sudden hæmoptysis and a low grade fever. The fever subsided in ten days and has not reappeared. There has been scanty mucopurulent sputum often absent with often an

irritating, unproductive cough. At intervals of two to four weeks, rarely longer, a pure bloody sputum, usually much less than a teaspoonful in quantity has been brought up, repeated once or twice, after which the blood disappears. With the onset, there was moderately severe pain in the right fourth and fifth intercostal spaces in front and at the very beginning showers of small rales, within the same region, which promptly disappeared. The patient apparently recognizes the immminence of blood sputum by a sensation of fullness in the area of discomfort. With the exception of a recent rather sharper attack of discomfort with fever and audible rales, the condition has been stationary. There is slight loss of weight, and what loss of strength there is may be accounted for by the necessity for rest in bed at times of hæmoptysis. The sputum showed at first a small encapsulated diplococcus. Late in December spirochitæ were discovered on examination with a dark field. It has never shown elastic tissue.

A tentative diagnosis of pulmonary spirochetosis was made upon this finding and the general course of the illness. The physical findings have at all times been indefinite and inconclusive. Röntgen ray studies of the chest showed from the outset, two small areas of infiltration in the middle lobe of the right lung, which have remained largely unchanged, until very recently. The last plates show some evidence of inflammatory thickening involving the lower lobe and possibly provoking partial fixation of the right diaphragm. The diagnosis remains a question. The patient at one time had had a pyelitis. The conditions to be considered are:

(1) A localized infection of the pulmonary tissues following the acute respiratory disturbance six months ago, perhaps primarily a spirochetosis.

(2) Embolic foci of infection arising from a low grade pyelitis, for which there is little other evidence, and (3) an early primary carcinoma of the lung. The characteristics of

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

the X-ray findings do not serve to differentiate these possibilities.

*Case II: Mrs. A. F. Age 23.* Two weeks after tonsillectomy in May 1922, developed a cough and eight weeks later spat up five or six ounces of blood. From that time on the patient had an irritative cough, with periodic evacuation of offensive muco-purulent sputum, in which no tubercle bacilli have been found at any time, and no elastic tissue. From June until November 1922, when she came under our observation, she had five other pulmonary hemorrhages, all of smaller extent than the first. She had become weak, anæmic, and had lost much weight. Fever was variable. Physical examination revealed an area of impaired resonance and small moist rales with distant breath sounds beginning at the second and extending to the fourth right intercostal space and from the right border of the sternum to the right mammary line. Röntgen ray examination showed a retort-shaped area of density in the middle lobe of the right lung, situated anteriorly. The conclusion of abscess of the lung, seemed fully justified. In spite of the duration of the condition, it seemed fair to attempt to empty the area by collapsing the right lung by means of artificial pneumothorax. This was done by Dr. Albert Taussig, in successive stages, was well borne by the patient, and was maintained for five weeks by repeated injections. At that time the patient contracted a severe cold which evidently led to further lighting up of the infection and destruction in the affected area with increased cough, offensive sputum, and fever, and demonstrable enlargement of the involved area both on physical examination and by x-ray examination. The progressive series of plates illustrates this. Inasmuch as nothing could be hoped for from the further use of artificial pneumothorax, resort was eventually had to drainage through the third intercostal space at which point the infected area had become adherent. This was done by Dr. M. B. Clopton, by means of a galvano cautery. Several pockets were opened up with a profuse offensive discharge and cessation of the cough followed. It remains a debatable question as to whether or not bronchiectatic cavities had developed. The X-ray plates give no information as to this. The patient succumbed very rapidly to a secondary brain abscess on April 22nd. Unfortunately no autopsy was permitted.

*Case III: A.* A man aged 29, had had "influenza" for ten days, five weeks before presenting himself for examination. About three

weeks after recovery from his respiratory infection he was seized with severe pain in the right lower chest anteriorly. The physical signs at the time had led his physician to aspirate the right chest under the impression that fluid was present. No fluid was obtained. Physical examination at the time the patient came under observation, showed impaired resonance, absent breath sounds, and diminished vocal fremitus in the lower right chest in front. X-ray examination showed an area of density in the right lower lobe, close to the median line. There was marked loss of strength, some loss of weight, moderate fever, and profuse, offensive sputum which contained elastic tissue and diplococci. While in the hospital, the patient improved steadily, losing his fever, bringing up less and less sputum, and eventually making an apparent recovery. Physical signs disappeared at the same time and X-ray studies showed a progressive diminution in density of the involved areas as the plates show. The patient is at present at home under probation. Artificial pneumothorax was considered in this instance, but was given up as progressive improvement set in.

On re-examination on March 22nd, as the X-ray plate shows, little trace of the infiltration can be detected.

This patient illustrates what undoubtedly happens more frequently than we are aware of, in that he represents an acute abscess even showing elastic tissue in the sputum, which tends to get well under complete rest and good feeding. It would, of course, have been considered a brilliant result if pneumothorax had been used. Clinically, it represents the resolution of a destructive pulmonary process which in the first case cited has remained stationary and in which there is room for question as to diagnosis, and which in the second has gone on to a well established abscess of long standing, which tends to involve progressively more pulmonary tissue.

*Case IV: Miss M. W. U. Aged 26.* Had influenza January 31, 1923, from which she apparently recovered about February 6. On February 24th, she again came under observation because of a persistent fever which followed a "cold" contracted a week before. There was cough with little expectoration—sputum not examined. Physical examination showed an area of impaired resonance extending from the right second rib at the sternal junction to the fourth rib at a point two and one-half inches to the right of the mid line; a few fine crackles were audible in the third right interspace in the mid-clavicular line.

The apices and bases were clear. X-ray plate showed evidence of a localized right inferior peribronchial infiltration semiacute in character and moderately well circumscribed in area. No evidence of tuberculous infection existed.

On March 16th, after continuous rest in bed for two weeks, all general reaction had subsided, but dullness still persisted two inches to the right of the mid sternal line in the fourth and fifth interspaces, with squeaking and fine moist rales in the fourth intercostal space. An X-ray plate shows progressive clearing up of the original condition; the patient was discharged well on the 28th.

This case shows much the same initial involvement as Case III, but had little sputum which soon disappeared. As the last lantern slide shows, the infiltrated area cleared to a large degree in the following twenty days, without passing through the stage of tissue destruction as did the preceding case.

*Case V: Miss E. Aged 40.* Had evidently had what appears from the history to have been pleurisy on the left side beginning in June 1921, and neglected by way of Christian Science treatment. On coming under observation in December 1922, she was greatly emaciated, had a practically continuous cough with offensive sputum, and recurrent fever. The left chest was completely flat on percussion and fixed in position. X-ray examination showed a very slight area of aeration in the extreme apex of the left lung. As the plate, which is otherwise entirely dense, will show, the mediastinum was not displaced to the right. Repeated aspiration was required to find a collection of pus in the left scapular line in the eighth intercostal space. A rib resection at this point revealed a small pus cavity which communicated with a bronchus. The sputum was greatly reduced by this procedure. X-ray plates, as the next slide will show, reveal a greater degree of aeration in the upper portion of the left chest, but also bring out the presence of a cavity in the upper lobe, which showed on fluoroscope examination a definite fluid level, changing with position. What the original character of the case may have been is impossible to conjecture. In its ultimate form it was certainly an encapsulated empyema which had ruptured into a bronchus, forming a so-called pleural vomica. Furthermore, it presents in addition, either an abscess in the left upper lobe, which is not connected with the first cavity encountered, or very likely an interlobar empyema abscess. An attempt to reach this area was precluded by the patient's

refusal of any further operative interference. Death ensued sometime later, following the progressive toxæmia, and repeated hæmorrhages from the bronchial fistula. Autopsy was unfortunately refused.

The second group or type of case consists of pleural effusions following respiratory and other infections.

*Case VI: Mrs. G. M. Age 35.* Had had an indefinite but severe respiratory infection, probably a broncho-pneumonia in February 1922, from which, as she said, she had never entirely recovered. When she presented herself in November 1922 for investigation, she was greatly harassed by a frequent, unproductive cough, aching in both sides of the chest and failed to regain her endurance. There was also a well marked nasal sinus infection. The chest showed an impaired percussion note at the base of each lung several inches above the normal site and sharply marked, together with loss of tactile and vocal fremitus and absent breath sounds over the same area. Anteriorly on the right side the area of impaired percussion merged with the right side of the cardiac dullness, extending obliquely downward from the base of the heart to the diaphragm at the sixth intercostal space, rising again two interspaces in the right axilla. On the left side the area of percussion dullness merged with the apex of the heart in the fifth left intercostal space and extended horizontally outward. No change of fluid level accompanied change in position. On fluoroscopic examination these outlines were confirmed and it was found, as the slides will illustrate, that the shadows at the bases of the lungs shifted only slightly at certain points, but very definitely—namely, on bending to the left the area to the right of the heart increased in size and formed a more obtuse angle with the diaphragm. Similarly on the left side, the shadow in the costophrenic angle became broader. The conclusion inevitably reached was that of encapsulated effusions in both pleural cavities simultaneously. Aspiration showed non-purulent fluid on both sides. The fluid was inflammatory in character, and proved sterile on culture and guinea pig inoculation. No evidence of tuberculosis is presented on either physical examination, X-ray study, or laboratory findings. Repeated tappings have been required to make a permanent impression on the re-accumulation of fluid, no doubt, partly due to the fairly unyielding encapsulating adhesions. In the left pleura it is still a question as to whether a dense band of adhesions does not extend from the left lateral

wall to the left edge of the pericardium, producing a lateral tugging, demonstrable on fluoroscopic examination. Physical examination has not corroborated this. The lantern slides will illustrate the successive stages that repeated aspiration have brought out.

*Case VII: Mrs. F. Aged 26.* Had a severe puerperal infection in August 1920. She has never recovered her endurance, and on physical exertion very easily becomes dyspnoic. Examination showed impaired percussion resonance in the right lower back and anteriorly, not shifting with position and accompanied by absence of tactile and vocal fremitus and absent breath sounds. The apex of the heart was displaced to the left. Fluoroscopic examination showed slight shifting density which could not be recognized on physical examination. Non-purulent fluid was removed on aspiration, and was found to be sterile. The heart's apex regained its normal position. The slides illustrate the definite encapsulation of the fluid.

The two preceding cases are similar in several noteworthy respects. They are both cases of encapsulated pleural fluid of long standing, the walls of which have been slow to yield, and have required repeated aspirations. It yet remains to be seen whether non-operative methods will suffice to obliterate the space so long filled by fluid. In both instances early attempts at more or less complete removal of the fluid were followed by severe pleuritic pain, even though the oppression in the chest was at the same time greatly reduced. And on one occasion in each instance definite evidence of shock occurred, apparently accompanying the severe pain.

### BRONCHIAL ASTHMA AND ALLIED CONDITIONS\*

M. D. CARNELL, M.D.,  
OKMULGEE, OKLA.

The question of bronchial asthma has been the subject of much discussion among the profession in recent months, with much divergence of opinion, especially as to the etiology. The frequency with which this subject has been introduced is due to the increased interest in the attempt to demonstrate protein sensitization as an etiologic factor in bronchial asthma.

Bronchial asthma has been defined as a condition characterized by rypnea, both in-

spiratory and expiratory, usually expiratory—due to bronchial spasm and edema of the bronchial mucous membrane. Bronchial asthma may be acute or paroxysmal in type, or the condition may be prolonged to such an extent that it becomes subacute or chronic, and not all cases of dyspnea are asthma, but sufficient evidence has been obtained to restrict its use to the affection known as bronchial asthma or spasmodic asthma, or the condition characterized by dyspnea, from an allergenic reaction.

"The word *allergy*<sup>1</sup> is reserved for the reactions occurring in individuals naturally hypersensitive on the absorption of the specific allergen.

"The word *anaphylaxis* applies to those reactions produced in the human or in the animal after an artificial hypersensitiveness has been brought about. Theobald Smith in 1903 observed a peculiar fatal reaction in guinea pigs to a second dose of serum, not in itself toxic, provided a sufficient time intervened between the first and second injections."

Cooke<sup>2</sup> and Vander Veer<sup>3</sup> make the following classification of bronchial asthma.

#### I. Allergic.

1. By inhalation.
  - (a) Animal dander.
  - (b) Pollens.
  - (c) Sachets and perfumes.
2. By ingestion.
  - (a) Drugs.
  - (b) Foods.
3. By absorption from focus.
  - (a) Bacterial proteins (questionable).
4. By subcutaneous or intravenous injection.
  - (a) Therapeutic sera.
  - (b) Chronic bronchitic and emphysema.
  - (c) Pulmonary tuberculosis.
  - (d) Cardiorenal disease.

#### II. Non-Allergic.

- (a) Enlarged bronchial glands.
- (b) Reflex bronchospasm.
- (c) Acute bronchitis.
- (d) Thymic enlargement.

The above classification gives somewhat of a working basis as a routine in making the examination and arriving at a diagnosis, and while the authors do not claim that it is complete, it is, in a measure, quite feasible in the light of our present knowledge of bronchial asthma.

From a survey of the literature upon this subject, it appears that heredity plays an important part as a predisposing factor.

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

That one member of the family or near relative who has some slight idiosyncrasy to an unusual food, perhaps only observable for a short time<sup>2</sup> during their lives. That our likes and dislikes to various foods may also be a faint echo of similar sensitizations. A little over fifty per cent of the patients give a family history of some near relative having had asthma or hay-fever. Also fifty per cent of the patients show by the skin reactions that they are sensitive to some protein, whether horse hair, cabbage, wheat or what not. In fact the heredity cases are almost equally divided amongst those patients who are sensitive and those who are not. So that a patient who can be proven to be sensitive to a foreign protein is no more likely to give a family history of these complaints than any one of the other fifty per cent who are not sensitive.

Most all observers agree that the symptoms of allergy appear early. That is, where the inheritance factor is derived from both maternal and paternal sides the period of maximum liability is in the first five years, when 36.6 per cent develop manifestations. On the other hand, it is maintained that where the inheritance is paternal or maternal and not both, the height of the incidence curve is reached between the ages of ten and fifteen years; in those cases in which no history of inheritance is given and in which, therefore, it is presumably more distant, the onset curve does not reach its maximum until the age of from twenty to twenty-five years.

Thus it becomes pertinent<sup>3</sup> that the family history of approximately fifty per cent of cases supplies one link in the diagnosis. One should be warned that scrupulous attention must be observed in obtaining this history. All types of dyspnea have been called asthma in the past, so that one applies to this antecedent history the same safeguard one applies in obtaining the history of the present illness. The question of hay-fever and urticaria in the antecedent is rather easily determined, but the question of asthma and eczema is shrouded in all sorts of phantasies in the lay mind.

It is extremely rare, with the exception of hay-fever<sup>4</sup>, to find that the patient is sensitive to the same protein as the parent; in fact, it is not more common even in hay-fever than the law of averages would allow. Such a thing as the direct transmission of sensitization to the offspring seems possible in man, but as in animals, it soon wears off.

Dale and Laidlaw<sup>4</sup> make mention of the effect of a short surfeit of protein as an im-

portant factor in the induction of sensitization in man, is the taking of a considerable quantity of protein for a short time, followed by a period without it. As an illustrative case, is mentioned a child which was fed by his mother for seven months, except for forty-eight hours when she was taken ill, and he was given cow's milk (which is the ideal condition for making him sensitive to cow's milk, a short feed of milk for forty-eight hours, and then no more, and also that this did not in any way upset him). On weaning the child it was found that he could not take cow's milk, he vomited after it, and had nettlerash. He was put on goat's milk with success.

The writer's case was similar in many respects, in that the mother had a major operation when the baby was one month old; cow's milk was given for forty-eight or seventy-two hours which agreed with the child. When the child was two months of age it became necessary to wean the child from the breast, the mother's breasts failing to secrete milk further, at which time the child was put on cow's milk which caused the child to have a temperature of 104, vomiting, diarrhoea, and an extreme case of excoriated buttocks. Goat's milk was used in gradually increasing doses with the same result. Malted milk, vegetables, broths and gruels as a diet solved the problem. This case, as did Dale and Laidlaws, later developed asthma at the age of five. Beginning with very small amounts of cow's milk, it is possible to desensitize such cases to a great extent.

That animal emanations is a causative factor, Walker found fifteen per cent of 600 cases were sensitive to proteins found in animal emanations; fifty-seven patients were sensitive to horse hair and dandruff alone, six to cat hair alone, three to feathers alone, three to cattle hair alone, and the remaining thirty-one patients were sensitive to horse hair in combination with dog hair or some other animal emanation.

Cooke<sup>1</sup> recites a case in which an individual who was exquisitely sensitive to horse serum gave a history of a severe allergic reaction on the subcutaneous injection of the serum in the form of diphtheria antitoxin eight years previously. Cutaneous and ophthalmic reactions were markedly positive. The inhalation of a minute amount of powdered horse serum gave just as an immediate reaction, with symptoms of hay-fever and asthma. Another case, a child, gave a history of acute egg-poisoning. The ingestion of the most minute amount of egg-white was im-

mediately followed by tingling and swelling of the tongue and fauces, swelling of the nasal mucous membrane and watery nasal discharge, cough and dyspnea. This child gave prompt and marked cutaneous and ophthalmic reactions to the test. The inhalation of a minute amount of egg-white gave the same reaction.

The writer saw a case in which the individual was extremely sensitive to hops, the ingestion of which caused swelling of the mucous membrane and a watery nasal discharge, together with marked urticaria.

These cases illustrate the fact that it is the allergenic substance itself, it matters not how introduced, that produces the symptoms. Just how this protein substance or protein derivative brings about the particular symptoms is not definitely known.

Eustis<sup>5</sup> claims that most cases of bronchial asthma are due to the absorption of proteolytic toxins. These toxins may be absorbed from a suppurating sinus in the nose or from the intestinal tract, and that treatment of intestinal toxemia is as important as drainage of any focal infection.

Jaulfield<sup>6</sup> asserts that in some typical cases of true bronchial asthma no definite etiology can be demonstrated. Between such cases and those in which protein sensitization has been clearly established, there may be no detectable difference except that they are protein negative to between seventy and eighty proteins.

Zugsmit<sup>7</sup> believes that the large bowel is a prominent place in which the poison causing asthma occurs. It is not the only place, but the proportion of asthmatics with colitis, as indicated by the mucus in the stools, is surprising. Even in the severest attacks a well-administered enema will have an alleviating effect.

Walker<sup>1</sup> using soluble bacterial proteins, was able to demonstrate hypersensitiveness by the skin reaction in patients with bronchial asthma, but there is still considerable difficulty in demonstrating the fact that bacteria cause bronchial asthma by strictly allergic reactions.

Vander Veer<sup>8</sup> states that if a bacterial protein giving a positive cutaneous reaction is in fact the real cause of the asthmatic manifestation in any individual, then the injection of such protein subcutaneously in sufficient amounts should produce a constitutional reaction by an acute attack, as can be done readily with the epithelial and pollen extracts. In spite of many attempts no such

result has yet been obtained. Still another test of the hypothesis that bacterial proteins are themselves causes of asthma would be the therapeutic efficiency of bacterial vaccines and extracts. Cases treated in this way gave satisfactory results in only ten per cent of the cases, and that this being such a small percentage that the apparent improvement can readily be attributed to unknown factors. The writer has used autogenous vaccines in a number of cases with varying degrees of success. The majority showed no improvement.

The diagnosis of these cases require considerable patience in obtaining the antecedent history. A careful physical examination should be made in every case. The chief reliance, however, is in the skin test. The skin of an allergic subject undoubtedly has the same hypersensitiveness as the nasal and bronchial mucous membranes. This test is made by scarifying the flexor surface of the forearm and applying the concentrated protein in powder form. The intracutaneous test is used by many but it is claimed this is too delicate and most prefer to use the scarification test. Twenty to thirty tests may be made at a time if proper precautions are observed. The positive reaction occurs in from five to fifteen minutes, which is evidenced by a considerable increase in the size of the papule and urticarial wheal develops with pseudopod-like projections out into the zone of hyperemia. There is usually some itching attending the reaction. The reaction usually disappears inside of twenty-four hours. In other cases there is only a moderate reaction in which the urticarial wheal develops but the pseudopods are absent, and the itching is not so pronounced. This reaction disappears much sooner. The slight reaction is evidenced by a slight hyperemia and only a slight increase in the wheal. A doubtful reaction is difficult of interpretation. A control should always be used.

Rosenbloom discussed treatment under three heads: (1) Eliminating proximity to the offending substance; (2) altering the protein by high temperature; (3) desensitizing the patient by feeding small doses of protein.

With reference to pollen asthma, it is not always possible for many of these patients to avail themselves of the opportunity of travel in order to remove themselves from regions in which certain grasses pollenate. It then becomes necessary to give them specific treatment in the form of injections of the specific antigen. In beginning these injections, it is best to begin four to six weeks

before the anticipated attack and continue them through the season. These are usually given from three to seven days, gradually increasing the size of the dose.

The treatment may be phylactically or prophylactically, and of one hundred and thirty-five cases treated by him in this manner, all showed associated symptoms of hay-fever, of which 89 per cent gave satisfactory results. He records at the same time that asthma is more readily controlled than the hay-fever in that fifty-three per cent showed no signs of asthma, while only six per cent were entirely free from hay-fever. Practically all investigators agree that the effect of the injections are temporary and treatment must be repeated each season.

In the preparation of food at high temperature, it is claimed, may alter the protein content in such a way that it may be taken without such untoward results. It is a fact, however, that certain foods which precipitate an attack may be omitted from the dietary, or be given in small increasing amounts that in many instances desensitize the individual. This is not always practical among children, as milk, wheat and eggs are the chief articles of diet, and it is difficult to withhold these articles of diet. Many children outgrow their sensitiveness just as many nursing infants outgrow the sensitiveness to breast milk in that they develop colic, urticaria, excoriated buttocks and the like.

Drugs which cause asthma should be avoided. In one of my cases an assistant pharmacist had repeated attacks of asthma as long as he worked among drugs. Leaving the drug business and working as a retail groceryman the asthma left him entirely. His weight increased amazingly after the transfer.

As has been stated, asthma complicated by chronic bronchitis may be relieved in many instances by the injection of autogenous vaccines.

*Case 1. L. D. W. J.* Age 56, train auditor, gave a history of having had asthma for twenty-five years following a severe attack of pneumonia. Attacks more frequent in late fall, winter and spring and in damp weather. Weight 153. Well nourished; barrel chest; difficult inspiration; considerable cough and wheezing. Copious muco-purulent expectoration. Laboratory report gave Tb. negative, a few streptococci, staphylococci predominating, very few pneumococci; long bacilli very few, some long threads resembling streptothrix throughout; short bacilli very

few, resembling *B. influenza*; long diplococci and tetrads resembling *M. tetragena* few. Systolic blood pressure 132, diastolic 86. A stereoscopic radiograph of the chest showed much thickening of the bronchial tubes in numerous areas; a very large heart, and enlarged bronchial glands practically as large as the heart itself. Upon examination of the heart the sounds were quite like that found in Stoke's-Adam's syndrome.

An autogenous vaccine was given with marked constitutional reaction but with much benefit. Increasing doses are being given at the present time which has checked the copious expectoration. No permanent result can be hoped for in this case aside from some amelioration of the symptoms. Continuation of the vaccine therapy for some months may lessen the frequency and severity of these attacks. And, as heretofore mentioned, only ten per cent of cases of bacterial origin are benefitted with this treatment.

Adrenalin in two to five minim doses may cut short the attack of asthma, and is of some benefit in hay-fever applied locally. Hoxie and Morris<sup>9</sup> cite a case of six years adrenalin administration of approximately seven c.c. a day, mostly hyperdermatically. After sudden death autopsy showed tremendous engorgement of capillaries and venules of the intestinal villi, and slight aortic sclerosis.

The systematic handling of all cases in which symptoms of food poisoning occur, with painstaking effort in determining their causes, will clear up many cases which have puzzled the practitioner, and increased the knowledge obtained thereby will increase efficiency and add to the comfort of the patient.

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## A NEW TREATMENT IN PNEUMONIA\*

L. A. MITCHELL, M.D.,  
FREDERICK, OKLAHOMA

Pneumonia has always been interesting, both to the laity and the profession. It is interesting to the laity because it still has the greatest mortality of any disease in the temperate zone. It is interesting to the profession because of its peculiar onset and termination. Hence, any advance in its treatment whereby either its morbidity or its mortality is lessened will prove to be of vast interest to all humanity. And there has been great advancement in its treatment in recent years. It is a long step from the good old days when in treating pneumonia, all air possible was excluded from the sick-room; when heavy, mussy poultices were constantly applied to the chest; and when the doctor was afraid to give a narcotic, to the present specific treatment.

It is taken for granted in this paper that all modern hygienic rules of treatment are observed, such as plenty of fresh air, rest in bed, cleansing the patient and bed, etc.

For a long time it has been well known that quinine exerted a favorable influence on the course of pneumonia, and doubtless most of you have used it as a routine in your practice. But we did not know why it was useful. It was thought it merely increased the leucocytes, thus adding to the total number of soldiers. Large doses of quinine were quite popular fifteen years ago in the treatment, and this method was dignified by the name of the Galbraith Treatment of Pneumonia. It consisted of giving thirty grain doses every thirty minutes till one hundred twenty grains had been given. Instances have been reported after such treatment where the patient was practically well the following day. It was also noted that few patients suffered from cinchonism, as people with other diseases would.

For some time we have known that there is a principle in the cinchona tree which would kill the pneumococcus in vivo, provided the drug could be placed in the blood in sufficiently strong dilutions. So it was a task for the organic chemists to isolate this principle, and give it to the world. This they have done, and it has been called chemically, ethylhydrocupreine. But it was no small task, for until the drug was refined it would cause total deafness or blindness, or both, in the animal or person to whom it was given.

This obstacle was overcome in part by producing a less soluble preparation, and now it is absolutely safe. The proper dosage also had to be worked out to eliminate the dangers mentioned above. It is white bitter powder, almost insoluble in water, but readily soluble in fats, ether, chloroform and alcohol. Moore, of the Rockefeller Institute, has experimented with it quite extensively. He has found that it possesses the ability to check or prevent the development of the pneumococcus in solutions of blood serum up to 1 to 400,000. Sir Almroth E. Wright showed that it would kill the pneumococcus in vivo when taken in the mouth by a patient. It is so specific in its action that it may even be used as a diagnostic procedure in true pneumonia. It acts against all types of this germ, but is especially effective against types I, II and III, and it may also be used in post-operative pneumonia.

Professor S. Solis-Cohen of Jefferson Medical College found it fatal to pneumococci by the test tube method as great as 1,000,000 to 2,000,000, showing an activity ten times as great as any salt of quinine used. It has also been shown to be more active when the temperature is elevated, a constant attendant of pneumonia.

Treatment should be started as early as possible. It is best to start within twenty-four hours. Four grains are given every five hours day and night. If the temperature does not fall in three days, either your treatment was started too late or you are not dealing with a true pneumonia. This fall in temperature is accompanied with a loss of pain and general sense of well-being. It is recommended that a glass of milk be given with each dose in order to prevent too rapid absorption.

Two cases are reported. H. R. G. male, age 27, took sick with influenza about March 8, 1923. He was seen first on March 10th, but it was not possible to say that he had pneumonia definitely till next day. He then showed rusty sputum, pain and fever. He looked sick, and is a thin, tuberculous appearing person, such as more readily is overcome by this disease. Early next day, March 12, he was started on ethylhydrocupreine in the dose and at the frequency mentioned above. His temperature went to normal March 14, and he had an uneventful convalescence. His consolidation was of the left lower lobe.

The other case was that of a girl ten years old. A diagnosis of lobar pneumonia of the right lower lobe on March 18, and treatment started the same day. She was given three

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

grains every five hours. Her temperature went to normal on March 21, and she recovered without complications.

It is admitted that the pneumonia which was prevalent in Southwestern Oklahoma the winter just passed was mild, but other cases treated by other methods did not recover as rapidly as the ones referred to above. It is also true that most cases were of the lobar form, although they followed influenza largely. It is not desired to show too much enthusiasm concerning this drug, but it seems that it merits further use. If it will shorten the length of the disease and prevent the occurrence of empyema, it would appear to be worth your consideration.

**DISCUSSION:** *Dr. G. W. West, Eufaula, Okla.*

Pneumonia has steadfastly maintained its high mortality rate in spite of the efforts of all schools of medicine to lower it.

Pneumonia has been treated with everything and with nothing, and the latter course compares favorably with any other treatment so far advanced, in fact, taking a thousand cases as they come, no treatment other than hygiene and fresh air, has given better results than any treatment with which it has ever been compared. This looks badly for our boasted progress in medicine.

I have been ever ready to welcome anything new that promised relief: I believe many things have been done that should not have been and that what relieves one will utterly fail in another. Poultices are worthless except the mustard plaster, which seems to have come to stay. It often relieves pain magically and never fails to bring the blood to the surface, for which purpose we often use verat, aconite, belladonna or glonoin. This may or may not be rational as it takes the blood away from the lung and thereby lessens its antigenic effect upon the diseased process. However, when there is deep cyanosis with engorgement, depletion and diffusion are imperative.

Some men would give digitalis here but to my mind could only aggravate the situation.

Many fads have come and have registered more failures than successes. I have never been able to see any good in heroic doses of quinine; but invariably give from twenty to thirty gr. preceded by a generous dose of calomel. This can be trusted to eliminate intestinal intoxication and malaria which gives a clear field for further treatment. After this I usually saturate the patient with iodide

of arsenic, the merits of which I have never been able to get others to see. Thus far is generally routine but no further, for every patient is a law unto himself. What would be indicated in the very anemic would be contra-indicated in the plethoric and vice versa. The same applies to the young, the old or alcoholic. I have had no experience with ethylhydrocupreine, but am willing to give it a trial with a fair measure of hope. I have often given cinchona bark as an expellent and may have builded better than I knew.

Nature cures pneumonia by building up an antigen in the blood and it seems to me that the most rational thing to do would be to assist nature in speeding up this process by the suitable administration of serobacterin rather than attempt to poison the germs in situation. Then again, if ethylhydrocupreine is only specific against the three types of pneumococci and the large majority of pneumonia fatalities are due to a mixed infection, streptococcus for instance, against which ethylhydrocupreine has no specific effect, I fail to see any logical reason for its administration in other than purely uncomplicated pneumonias.

*C. J. Fishman, M. D., Oklahoma City, Okla.*

The use of ethylhydrocupreine in the treatment of pneumonia has been announced for a number of years and when first used was considered a specific for pneumonia with the expectation that the prognosis in these cases would be entirely changed.

The expected results have not been attained and it is especially dangerous to judge conclusions from a few cases, because of the irregular course of the disease.

From clinical experience it is certainly true that during the course of epidemics, many cases run true to form. On the other hand, there are many exceptions, so that pneumonia cases will average eight days in duration, although some are seen to run as short a course as two days and as long as two weeks or more.

During the course of observation in the Military Hospitals it was definitely pointed out that we have, at the present time, no specific treatment of pneumonia except in the case of type I, in which the specific serum is of benefit, provided the cases are seen sufficiently early.

The use of quinine preparations has also been lauded to the highest degree but the results have been variable and now it is doubt-

ful whether quinine, even tho used in large doses, has any definite influence upon the disease.

The most scientific way of reaching conclusions regarding treatment of a disease, as variable in degree as is pneumonia, would be to take alternate cases in a large hospital service, treat the even numbers with the routine management and the odd numbers with the new drug. If the series is sufficiently large, conclusions could then be drawn which would be of value. Up to this time we may say no definite conclusions can be considered which have influenced the management of pneumonia to any appreciable degree.

### TO OUR MEMBERS AND COUNTY OFFICERS

We take this means to call attention to the fact that all membership expires automatically December 31. The remittance of annual 1924 dues should be in the office of the State Secretary before expiration of January if all the members' interests are to be adequately protected, as a matter of good business we should not wait until the last moment to attend to this matter. We have pointed out before that county secretaries are not paid anything for the collection, listing and forwarding dues, so it should be a matter of co-operation on the part of each member to personally call upon his secretary, remit for the coming year and settle the matter. Members are particularly requested to make these remittances through the county secretary, otherwise delay will be occasioned, many mistakes will occur, all of which may be obviated by transacting the business in an orderly manner.

We again call the attention of our members to the rule, which cannot be evaded by any means, wherein medical defense lapses if dues are not promptly paid and all accrued rights and privileges in that respect are lost and remain so until the date the member is finally replaced in good standing.

### NEW AND NON-OFFICIAL REMEDIES

**New Tuberculin B. E. Dried.**—To obtain this product, tubercle bacilli are dried, ground for several months in a ball mill, the finely disintegrated bacillary bodies are mixed with a suitable base and made into tablets. Each tablet represents a definite amount of New Tuberculin B. E. Dried.

**Tablets Tuberculin B. E.**—P. D. & Co.—New Tuberculin B. E. Dried, marketed in vials No. 1 of ten tablets, each tablet containing 0.0001 mg.; in vials No. 2 of ten tablets, each tablet containing 0.001 mg.; in vials No. 3 of ten tablets, each tablet containing 0.01 mg.; in vials No. 5 of ten tab-

lets, each tablet containing 1 mg.; also marketed in packages of 5 vials, Nos. 1, 2, 3, 4 and 5, inclusive. Parke, Davis & Co., Detroit.

**New Tuberculin T. R. Dried.**—The mass culture of tubercle bacteria is washed repeatedly, agitated again in water, washed, ground to complete disintegration, extracted repeatedly with water, and the water insoluble material, instead of being ground to form a suspension in water as in New Tuberculin T. R. Liquid, is dried. The dried material is thoroughly mixed with a suitable diluent. Each tablet represents a definite amount of dried tubercle bacilli.

**Tablets Tuberculin T. R.**—P. D. & Co.—New Tuberculin T. R. Dried, marketed in vials No. 1 of ten tablets, each tablet containing 0.0001 mg.; in vials No. 2 of ten tablets, each tablet containing 0.001 mg.; in vials No. 3 of ten tablets, each tablet containing 0.01 mg.; in vials No. 4 of ten tablets, each tablet containing 0.1 mg.; in vials No. 5 of ten tablets, each tablet containing 1 mg.; also marketed in packages of five vials Nos. 1, 2, 3, 4 and 5, inclusive. Parke, Davis & Co., Detroit. (Jour. A. M. A., Oct. 6, 1923, p. 1207.)

**Sal-Ethyl.**—A brand of ethyl salicylate—N. N. R.—For a discussion of the actions, uses and dosage of ethyl salicylate, see New and Nonofficial Remedies, 1923, p. 272. Sal-Ethyl is supplied in the form of Sal-Ethyl Capsules, 5 minims. Parke, Davis & Co., Detroit. (Jour. A. M. A., Oct. 13, 1923, p. 1285.)

**Antidysenteric Serum**—P. D. & Co.—An antidysenteric serum (see New and Nonofficial Remedies, 1923, p. 287) obtained from horses immunized against several strains of Shiga and Flexner types of dysentery bacilli. It is marketed in packages of one syringe containing 10 Cc.; in packages of one vial containing 10 Cc.; in packages of one vial containing 20 Cc. Parke, Davis & Co., Detroit. (Jour. A. M. A., Oct. 20, 1923, p. 1363.)

**Cheplin's B. Acidophilus Milk.**—A milk culture of bacillus acidophilus, containing not less than fifty million of viable B. acidophilus per Cc. at the time of sale. For a discussion of the actions and uses of bacillus acidophilus milk, see Lactic Acid-Producing Organisms and Preparations. (Jour. A. M. A., Sept. 8, 1923, p. 831). For adults the dose is from 500 Cc. to 1,000 Cc. Cheplin's B. Acidophilus Milk is marketed in bottles containing respectively 200 Cc. and 400 Cc. Cheplin Biological Laboratories, Inc., Syracuse, N. Y.

**Diphtheria Antitoxin Standard** (Purified and Concentrated Globulin).—Formerly marketed as diphtheria antitoxin concentrated (globulin). (See New and Nonofficial Remedies, 1923, p. 283). This brand of diphtheria antitoxin concentrated is also marketed in packages of one syringe containing 20,000 units. H. K. Mulford Company, Philadelphia.

**Diphtheria Antitoxin Superconcentrated.**—The product resembles serum antidiphthericum purification U. S. P. It differs in that the volume per thousand units is smaller, and the protein content is claimed to be lower. It is marketed in packages of one syringe containing respectively 1,000 units, 3,000 units, 5,000 units, 10,000 units and 20,000 units. H. K. Mulford Co., Philadelphia.

**Protein Extracts Diagnostic**—P. D. & Co.—In addition to the Protein Extracts Diagnostic—P. D. & Co., listed in The Journal, Sept. 15, 1923, p. 929, the following have been accepted: Colon Bacillus Protein Extract Diagnostic—P. D. & Co.; Gonococcus Protein Extract Diagnostic—P. D. & Co.;

Micrococcus Catarrhalis Protein Extract Diagnostic—P. D. & Co.; Pneumococcus Type 1, Protein Extract Diagnostic—P. D. & Co.; Pneumococcus, Type 11, Protein Extract Diagnostic—P. D. & Co.; Pneumococcus, Type 111, Protein Extract Diagnostic—P. D. & Co.; Pseudodiphtheria Bacillus Protein Extract Diagnostic—P. D. & Co.; Staphylococcus Albus Protein Extract Diagnostic—P. D. & Co.; Staphylococcus Aureus Protein Extract Diagnostic—P. D. & Co.; Staphylococcus Citreus Protein Extract Diagnostic—P. D. & Co.; Typhoid Bacillus Protein Extract Diagnostic—P. D. & Co. Parke, Davis & Co., Detroit.

Diphtheria Toxin-Antitoxin Mixture (0.1 L plus)—Lederle. This product (see New and Non-official Remedies, 1923, p. 284), is also marketed in 30 Cc. vials. Lederle Antitoxin Laboratories, New York. (Jour. A. M. A., Oct. 27, 1923, p. 1441.)

### PROPAGANDA FOR REFORM

J. T. Ainslie Walker's Latest Intestinal Disinfectant.—About a year ago, a flood of reprints mailed from London reached the editors of American medical journals and others. The reprint dealt with "A New Suggestion in the Treatment of Puerperal Eclampsia" by Captain J. T. Ainslie Walker. The reprint was to the effect that as "the problem of intestinal disinfection has been solved" rational treatment of the condition was greatly simplified, but it was not stated how the problem of intestinal disinfection had been solved. A few months later, the same editors received reprints which dealt with "Dimol" in the treatment of summer diarrhea in infants, and an article by A. N. M. Davidson. Still more recently, American medical editors have received a pamphlet mailed from England which purports to be a book sent for review. This pamphlet is an obvious puff for Dimol by J. T. Ainslie Walker. Dimol is a preparation introduced by J. T. Ainslie Walker of England, and is sold in this country by the Anglo-French Drug Co. Some time ago Mr. Walker was connected with the Barrett Manufacturing Co., to exploit "Pyxol," a proprietary disinfectant resembling compound solution of cresol. Later, Mr. Walker introduced his first "intestinal germicide" under the proprietary name "Trimethol." This preparation, which was reported on unfavorably by the Council on Pharmacy and Chemistry, appears to have been very similar to the product now exploited as Dimol. Mr. Walker would have us believe they are different, but the American agent of Dimol makes this claim: "Dimol is the registered name for the product known in the U. S. A. in 1914 under the name 'Trimethol'." (Jour. A. M. A., Oct. 6, 1923, p. 1224.)

Colorless Iodin Preparations.—The so-called colorless iodine preparations do not contain iodine in the free state, but some form of combined iodine, chiefly iodic. For instance, Tinctura Iodi Decolorata, N. F., is a solution of sodium iodic and ammonium iodic obtained by mixing iodine and sodium thiosulphate, stronger ammonia water and alcohol. When tincture of iodine is used externally, it is with the view of obtaining the therapeutic action of free iodine. Since the colorless iodine preparations do not contain free iodine, their external use as a substitute for tincture of iodine is irrational. When tincture of iodine is given internally, the free iodine contained in it is converted into iodic before absorption. Therefore, tincture of iodine and the so-called colorless iodic prepara-

tions given internally have essentially the same therapeutic effect. However, if a colorless iodine preparation is to be administered, it would be simpler and more rational to administer sodium iodic. (Jour. A. M. A., Oct. 20, 1923, p. 1383.)

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Fisher's Uterine Tonic (Fisheropathic College Association), containing ammonia, traces of ammonium salts, including iodic and carbonate, vegetable extractives, glycerin and water. Fisher's Kidney Food (Fisheropathic College Association), containing a small quantity of vegetable extractives, citric acid, sugar, alcohol and water. San-Yak (Burnham Medical Co.), composed essentially of alcohol 7.0 per cent, plant extracts, including cinchona and a laxative drug, 2.4 per cent, and water 92.0 per cent. Plough's Prescription C-2223 (Plough Chemical Co.), consisting essentially of potassium iodic, extracts of plant drugs, including colchicum, a trace of salicylic acid, glycerin, alcohol and anise flavoring. Chicawampa Tea (Chicawampa Tea Co.), consisting essentially of cut herbs, principally the Ephedra nevadensis (known locally as "Caynote" or "Canutlio") with small proportions of peppermint and sage. (Jour. A. M. A., Oct. 20, 1923, p. 1380.)

The Action of Arsenicals in the Body.—Voegtlin and his associates in the Hygienic Laboratory of the U. S. Public Health Service have observed that certain compounds containing sulphur groups in the SH form are able to counteract the toxic effects produced by arsenoxid on trypanosomes and a representative mammal. They advance the theory that arsenic in certain trivalent forms is a specific poison for the SH group in the trypanosome organism, and that arsenic causes death of the cells by interfering with the oxidative processes. Voegtlin and his associates concluded that the failures reported in the treatment of the later stages of syphilis are due to the fact that arsenphenamin, neoarsphenamin and silver arsphenamin lack the essential penetrative power for the infected tissues, and for this reason, they do not reach the last parasites in sufficient amounts to cause their death. In the effort to secure a more complete sterilization of syphilitic patients in the more advanced stages of the disease, sulpharsphenamin, tryparsamid, and 3-amino-4-oxyphecol arsenic acid are suggested for trial as remedies of superior penetrative power. (Jour. A. M. A., Oct. 27, 1923, p. 1442.)

Van Ess.—The Van Ess Laboratories, Inc., Chicago, put out "Van Ess Special Dandruff Massage" and "Van Ess Liquid Scalp Massage." "Van Ess" is sold with the claims that it will make hair grow and that it will stop falling hair in two weeks. The A. M. A. Chemical Laboratory reports that Van Ess Special Dandruff Massage is a perfumed liquid which separates into two layers on standing. The upper layer consists essentially of a petroleum oil which appears to be kerosene. The lower layer appears to be composed of water and alcohol containing small amounts of quinine sulphate, coloring matter and perfume. The Laboratory concludes that it is probable that a mixture of 35 parts of kerosene, 15 parts of alcohol denatured by the addition of 2 grains of quinine sulphate per fluid ounce and 50 parts of water would have whatever therapeutic properties the Van Ess Special Dandruff Massage possesses. (Jour. A. M. A., Oct. 27, 1923, p. 1461.)

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### EDITORIAL

#### THE FAMILY PHYSICIAN AND TUBERCULOSIS

The average family physician takes too little interest in pulmonary tuberculosis. Even though he may find the diagnosis interesting, he is inclined to treat lightly the question of management and if management is attempted at home it may easily become a "haphazard" procedure for want of detailed control. If the patient goes away from home he may fail unless the family physician urges sanatorium care or at least the necessity of seeing a competent physician in order that he may have definite direction.

This lack of interest is not altogether due to lack of knowledge as some over zealous and ultra dogmatic tuberculosis workers would have us believe, but rather to a combination of circumstances and conditions. The people are being taught that the family physician doesn't know much about tuberculosis and consequently a feeling of distrust and uncertainty has arisen. There is no specific remedy and the treatment is, at best, rather uncertain in its results and must be continued over such a long period of time that both patient and physician may grow weary long before the disease is arrested. The glowing descriptions of "climate criers" are constantly playing upon the sensitive minds of these unfortunate victims and in some instances even the family physician may have an exaggerated idea as to the efficacy of climate. A patient with a disease so chronic in nature, unless unusually well poised, will welcome the prospect of a sure, quick cure and consequently many such patients, after the faithful investment of much honest routine management, will "throw up" everything for the flattering promises of the charlatan. The family physician often hesitates to make a diagnosis of tuberculosis because of the abiding fear which dwells in the hearts of most people, ready to cause doubt or resentment if he dares suggest the presence of this disease.

It is any wonder that the family physician becomes discouraged? He deserves the help and sympathy of every physician who is especially interested in tuberculosis and of every one engaged in tuberculosis work. While these are genuine obstacles, they are not insurmountable, provided the family physician is willing to shoulder his full responsibility. He should ever keep in mind the fact that if all the beds set apart for tuberculosis in the United States were kept full all the time the great majority of people suffering from tuberculosis would still be sorely in need of treatment and such treatment, if given at all, must be given at home or away from home outside the sanatorium. He should remember that the chief advantages in sanatorium treatment are control and education and not change of climate. It is safe to say that change of climate is seldom worth the price of transportation. The small advantage claimed in climatic resorts is in all probability due to a peculiar psychology induced by long continued false teaching. Through re-education a more wholesome psychology could be produced, founded upon truth. This would be more productive of good because it would benefit all instead of the limited few who can afford

to have the luxury of climate. Every time the well to do patient goes to another climate he leaves behind at least a half dozen who are financially, or otherwise, unable to have a change and who are thereby mentally depressed because people are encouraged to run after false gods. The plain truth should be presented to the rich and the poor. Why disturb the faith of the poor in the one therapeutic agent, climate, which is to be had without cost anywhere and at any time.

Finally the family physician should remember that the diagnosis and treatment of tuberculosis are reasonably simple and the fundamental principles underlying the same, can be acquired by any physician who is truly qualified to practice medicine.

L. J. MOORMAN.

#### MEMBERSHIP FOR 1924

This message is in keeping with that annually sent our members at this time of the year to remind them that now is the time to see the county secretary and renew membership for the coming year. That this should be done promptly, in December, certainly early in January at the latest, goes without saying. Many important factors may hinge upon the receipt of your annual dues before expiration of January. Omission to pay and have a clear record during this month may cost some member dearly; invariably it costs some forgetful member or members hundreds of dollars when they are called upon to pay individually large attorneys' fees, which otherwise would cost them nothing. That phase alone should prompt everyone to attend to this matter at once.

Another factor, too, is the immense amount of work saved county secretaries and this office when the payments are made virtually at one time. In this case the county secretary performs once that which may otherwise be duplicated many times. Sources of error of many types are avoided, in fact, it is the most satisfactory method known for carrying out the small transaction called for. So far as the state secretary's office is concerned, every unnecessary additional letter or remittance, we know by experience over years of time, increases the chance for misunderstandings. Receipt of membership lists complete or nearly so gives us an opportunity to completely clean the slate, which otherwise we could not possibly do.

#### *Editorial Notes—Personal and General*

DR. H. A. WAGNER, Shawnee, returned home from an extended trip to the Pacific coast.

DR. E. A. LEISURE, Afton, attended the medical clinics at Kansas City recently.

DR. and MRS. A. M. MARSHALL, Chandler, made a short visit to Missouri last month.

DR. L. B. SUTHERLAND, Wilson, spent the month of November in attending the clinics at Chicago.

DR. ROBERT S. LOVE, Oklahoma City, has changed his location to 217 Liberty National Bank Building.

OKMULGEE COUNTY MEDICAL SOCIETY had a good meeting November 6th at Okmulgee, with the largest attendance in its history.

DR. S. J. BRADFIELD, Bartlesville, has returned from San Francisco where he attended a clinic.

DR. HARPER WRIGHT, Grandfield, returned from a post graduate course in Surgery at New York.

DR. FRED S. CLINTON, Tulsa, is back from attendance at the convention of the American College of Surgeons at Chicago.

DR. J. M. ALFORD, Oklahoma City, has returned from Chicago where he has been attending the clinics.

DR. J. J. HENKE, Hydro, recently celebrated the twentieth anniversary of the establishment of his practice there.

DR. P. P. NESBITT, Muskogee, attended the meeting of the Southern Medical Association at Washington.

DR. WINNIE SANGER, Oklahoma City, has been elected president of the State Federation of Women's Clubs, in session there recently.

DR. WALTER A. LACKEY and DR. S. E. STRADER, Oklahoma City, both read papers at the Osage County Medical Society meeting at Pawhuska recently.

DR. and MRS. A. W. ROTH returned last month from Chicago, where the doctor attended the clinical meeting of the American College of Surgeons.

CLEVELAND COUNTY MEDICAL SOCIETY had a good meeting recently with Drs. C. S. Bobo and Gayfree Ellison presenting the principal papers.

DR. W. D. BERRY, Muskogee, has returned from a trip attending the Mayo clinics at Rochester and the American College of Surgery at Chicago.

DR. and MRS. GREGORY A. WALL, Tulsa, are back from Chicago where the doctor attended the clinical congress of the American College of Surgeons.

TULSA COUNTY MEDICAL SOCIETY meeting November 12th was well attended; the program: Multiple Sclerosis by Dr. J. E. Dwyer, and Hydrotherapy by Dr. William P. Parks.

DR. and MRS. R. M. ANDERSON, DR. and MRS. T. D. ROWLAND, and DR. G. H. APPLEWHITE, Shawnee, attended the annual meeting of the Southern Medical Association at Washington.

TULSA COUNTY MEDICAL SOCIETY members helped materially to defeat the suit of an Abrams practitioner for compensation for treatment last month in the common pleas court at Tulsa; it was shown that actual damage had been inflicted on his patient by this practitioner. The jury decided against the Abrams disciple after several members of the Tulsa County Medical Society had testified.

DR. M. D. CARNELL, Okmulgee, experienced the theft and recovery of his Ford coupe on November 12th. When the car was recovered, it was found that a Boston bag was missing. It contained about \$100 worth of instruments and has not yet been found; if it is offered for sale to any physician, please notify Dr. Carnell at once.

**REGULAR ARMY EXAMINATION.** An examination of applicants for appointment in the Medical Corps, Regular Army, will be held during the period January 21 to 25, 1924, inclusive. Appointments will be made in the grade of First Lieutenant. To be eligible for appointment an applicant must be a male citizen of the United States between the ages of 23 and 32 and be a member of the Medical Officers Reserve Corps. Additional information concerning this examination may be obtained through MAJOR ROBERT B. HILL, Medical Corps, U. S. A., Room 1007, Tradesmens National Bank Building, Oklahoma City, Oklahoma.

**MEDICAL ASSOCIATION OF THE SOUTHWEST.** The annual meeting of the Association was held in Convention Hall, Kansas City, on Thursday, October 11th, in conjunction with the Fall Clinics. The following officers were elected for 1924:

President—Dr. W. H. Addington, Altoona, Kansas. Vice-Presidents—Dr. L. S. Willour, McAlester, Oklahoma; Dr. Joe Becton, Greenville, Texas; Dr. O. B. Hall, Warrensburg, Missouri; Dr. St. Cloud Cooper, Fort Smith, Arkansas. Secretary and Treasurer—Dr. E. H. Skinner, Kansas City, Missouri.

It was voted to hold the next annual meeting in Kansas City, Oct. 13, 1924, in connection with the Kansas City Fall Clinics. The Medical Herald and Electro-Therapist was selected as the official organ of the Association, and all members in good standing will receive the journal from this date.

TULSA COUNTY MEDICAL SOCIETY had a good meeting November 26. "A Symposium On Blood Pressure" was the program. Drs. C. T. Hendershot, (Director of the Program) "History and General Considerations"; L. C. Presson, "Blood Pressure in Anaesthetics"; J. F. Gorrell, "The Eye, Ear, Nose and Throat"; Edwin B. Wilson, "Blood Pressure in its Relation to Life Insurance"; Horace T. Price, "Blood Pressure in Respiratory Affections"; George R. Osborn, "Blood Pressure in Obstetrics"; Malcolm McKeller, "Blood Pressure in Its Relation to Genito-Urinary Diseases"; R. Q. Archley, "Blood Pressure in Renal Diseases"; Fred Y. Cronk, "Blood Pressure in Surgery"; and William J. Bryan, "Blood Pressure in Diseases of the Heart and Brain."

Several interesting clinical cases were presented. A dinner was given those on the program after the meeting by Dr. Hendershot.

MID-WEST ACADEMY OF OPHTHALMOLOGY and OTO-LARYNGOLOGY met in its seventh annual meeting at Muskogee, November 21st, with the following program:

10.00 A. M.—Drive to U. S. Veterans' Hospital and School for Blind. Start from Severs Hotel

#### Scientific Program

Anstrum Infection—Reference to Local Anaesthesia  
Dr. I. C. Green, Bartlesville

Discussion

Dr. L. C. Kuykendall, McAlester

Dr. Milton Morrow, Muskogee

Experiences in Nasal Plastic Surgery

Dr. Sam E. Roberts, Kansas City

Discussion

Dr. E. M. Seydell, Wichita, Kans.

Dr. D. D. McHenry, Oklahoma City.

Submucous Resection of the Nasal Septum.

Dr. Walter Berer, Tulsa

Discussion

Dr. Forrester King, Muskogee

Dr. Westover, Okmulgee

Ocular Phenomena in Brain Tumors, with Especial Reference to Pituitary Tumors

Dr. J. C. Dorsey, Wichita, Kan.

Discussion

Dr. Austin L. Guthrie, Oklahoma City

Dr. Roy W. Dunlap, Tulsa

Traumatism of the Cornea

Dr. W. Albert Cook, Tulsa

Discussion

Dr. Geo. A. Landis, Parsons

Dr. James E. Davis, McAlester

The Unsuspected in Cataract Operations

Dr. Harold Bailey, Springfield

Discussion

Dr. E. S. Fergerson, Oklahoma City

Dr. W. M. Nagle, Muskogee

Differential Diagnosis of Corneal Ulcers

Dr. H. Moulton, Ft. Smith

Discussion

Dr. A. W. Roth, Tulsa

Dr. S. E. Mitchell, Muskogee

Officers of the organization for 1923-1924 are Dr. C. M. Fullenwider, President, and Dr. M. K. Thompson, Secretary-Treasurer, both of Muskogee.

## DOCTOR ROBERT ISAAC ALLEN

One of the prominent surgeons of Oklahoma, Dr. Robert I. Allen, of Bristow, was killed October 27th, 1923, when struck and thrown about twenty feet by an automobile, as he was crossing the street after having parked his own car. He died within an hour. Dr. Allen is survived by his wife and three children. The accident was doubly tragic because of the death of Dr. Allen's mother, which was also the result of an automobile accident. Dr. Allen was forty-six years of age and had been associated with another physician for some time as the head of the Bristow Hospital. Funeral was held from the Presbyterian Church, of which he was a member.

Dr. Allen was born in 1877 and graduated from the Barnes Medical College of St. Louis, Missouri, in 1899. He was a member of the Creek County Medical Society, the Oklahoma State Medical Association, a Fellow of the A. M. A., a member of the Masonic Order and the American Legion. He is mourned by a wide circle of friends and associates to whom his death came as a blow.

## BOOK REVIEWS

**THE NOTE BOOK OF AN ELECTRO-THERAPIST.** By Mel. R. Waggoner, M.D. Price \$5.00. Pp. 173, with illustrations. Publishers, McIntosh Electrical Corporation, Chicago, Ill.

The Author takes up in eight chapters, 151 pages practically the whole scope of medicine. In Chapter Six, page 101 he describes a new apparatus, Waggoner's Pelvic-multimode, with this machine he treats all diseases of the lower abdomen, including acute and chronic gonorrheas, nephritis, lumbago, sciatica, female diseases, etc. Splanchnic insufficiencies, which he curtly describes as the causative factor in many obscure diseases. "Fully 80 per cent of all people show definite signs of it, even tho they are not yet suffering from any serious manifestations, it is the foundation for heart, kidney and circulatory diseases. It is the agent that allows or maintains a disease after it is formed."

His work on electro-coagulation and diathermy are excellent and well written, and in his closing remarks he says, "I cannot treat your cases for you, you must use your own brain. Whenever a person tells you that such and such a thing is good for such and such a condition, if he can not show you definite reasons why it should be good, never use it." The world war has done more to bring electro-therapy back on its feet than anything, but a word should be sounded here in warning not to let the pendulum swing too far and attempt to treat every ail and pain with this, for if so it is due for disrepute and discard."

N. D. NEELY.

**MEDICAL BIOMETRY AND VITAL STATISTICS.** Introduction to Medical Biometry and Vital Statistics. By Raymond Pearl, Ph.D., Pro-

fessor of Biometry Vital Statistics, Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company, Cloth, \$5.00 net.

**PRINCIPLES OF VITAL STATISTICS.** By I. S. Falk, Ph.D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$2.50 net.

**A MANUAL OF THE PRACTICE OF MEDICINE.** By A. A. Stephens, M.D., Professor of Applied Therapeutics in the University of Pennsylvania. Eleventh Edition, Entirely Reset. 12 mo. of 645 pages, illustrated. W. B. Saunders Company, Philadelphia and London: 1923. Cloth, \$3.50 net.

**A TEXT-BOOK OF ANATOMY AND PHYSIOLOGY.** By Jesse F. Williams, M.D., Professor of Physical Education, Teachers College, Columbia University, New York City. 12 mo. of 523 pages with 369 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$3.00 net.

**PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY.** By Charles B. Slade, M.D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third Edition, thoroughly revised. 12mo. of 179 pages illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, \$2.00 net.

**CLINICAL DIAGNOSIS.** By Laboratory Methods. A Working Method of Clinical Pathology. By James Campbell Todd, M.D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustration, 29 in colors. Philadelphia and London: W. B. Saunders Company, Cloth, \$6.00 net.

**GYNECOLOGY.** Third Edition. By William P. Graves, M.D., Professor of Gynecology at Harvard Medical School. Third Edition, Thoroughly Revised. Octavo volume of 936 pages with 388 half-tone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. Philadelphia and London: W. B. Saunders Company. 1923. Cloth, \$9.00 net.

**THE EXAMINATION OF PATIENTS.** By Nelson B. Foster, M.D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$3.50 net.

This is really a plea for adequate attention to those phases of clinical examination too often relegated to the background in favor of routine laboratory examination, which, it must be admitted sometimes, are rendered useless in the absence of concurrent proper physical and clinical examination. The author states that "Rarely can laboratory test alone reveal the nature of disease," and "throat culture which is positive for Klebs-Loeffler bacilli" does not necessarily mean diphtheria; he might be a carrier, or the organism might be non-pathogenic. These and many other considerations prompt the author in his work.

**A PRIMER FOR DIABETIC PATIENTS.** Second Edition, Reset. A Brief Outline of Diabetic Treatment, Including Directions for the Use of Insulin, Sample Menues, Recipes and Food Tables. By Russell M. Wilder, M.D., Mary A. Foley and Daisy Ellithorpe, Dietician. The Mayo Clinic. Second Edition, Reset. 12mo. of 119 pages. Philadelphia and London: W. B. Saunders Company, 1923. Clot, \$1.50net.

Recent advances in diabetic treatment due to insulin cause anything referring to diabetic treatment to become of interest. This little work contains a chapter on insulin, its dosage under conditions, reaction, antidote—an important matter—as well as its general use.

### OCULISTS AND OPTOMETRISTS

Epoch making acts usually are not recognized as such until long after their occurrence. As a rule, their significance is appreciated only after their effect upon subsequent events has had time to manifest itself. But it is possible that we who are at present engaged in the practice of ophthalmology may be witnessing such an epoch making act, in the position recently taken by a well known wholesale optical house. Briefly stated, this firm has closed out all of its accounts with optometrists, and has announced that it will fill prescriptions only when they are signed by members of the medical profession. In addition, it proposes to inaugurate a campaign, by means of which the public will be educated as to the differences between oculists and optometrists, and the essential limitations of the latter.

Heretofore, oculists have always been on the defensive against the attacks of the optometrists. In common with other "get knowledge quick" groups of pseudo-medical practitioners, the optometrists have been waging an offensive (in both senses of the word) campaign to obtain legal recognition in the several states of the union, and hardly a year passes without the oculists of some state being compelled to appear before its legislature to combat their activities, sometimes unfortunately to no avail. Whenever the oculists have appeared in an active capacity, it has been before some medical society or in some medical journal, informing their confreres of facts which they already know. They have been barred from the public press, partly from fear of appearing unethical, and partly because the public press, from motives of self interest, or otherwise, has refused to present their side of the question.

This anomalous position has long been recognized, and at the 1921 meeting of the American Academy of Ophthalmology and Oto-Laryngology, a Committee on Publicity and Service was appointed to consider the question of the proper method of acquainting the public with necessary medical facts. This is a step in the right direction, and if it is assisted by the action of the non-medical organizations, so much the better. The present status of refraction is an evolution from the days of the itinerant spectacle vender: but the instruction of the consumer has not kept pace with the progress of those whose duty and privilege it is to supply them with correcting lenses. Anything which tends to alter this state of affairs should be welcomed.

Another phase of this firm's action is its refusal to supply lenses to optometrists. Oculists in the smaller cities, and those in the larger ones who

supply their patients with lenses thru the medium of wholesale optical houses have been forced to obtain such lenses, etc., from the same firms which supply optometrists. Not only is this true, but it is stated that some firms make a special, lower price to optometrists, thus introducing the element of unfair competition. Optometrists are organized for action; oculists, for science. If oculists would realize what a force their united numbers could exert, by patronizing firms which cater exclusively to them, a revolution would be brought about in the attitude of other firms. They would realize that oculists would have a choice between "fair" and "unfair" firms, and many of them would undoubtedly swing into line. A decided check would be given to the activities of optometrists, for when an army is engaged in preventing the turning of its flank, it has little leisure for aggressive action. When a firm states by words and acts that it does not desire the accounts of a certain group of men, such action exerts a moral force beyond its immediate and direct results. In defending themselves from the implications produced, optometrists will hardly have time to attempt new inroads on the medical profession.—C. L.

### ANNOUNCEMENT OF REMOVAL

The many medical friends of Burroughs Wellcome and Company, will be interested in the removal of this well-known firm's New York establishment to their new building at 9-11 East Forty-first Street. This building which is a modern steel framed, fire proofed twelve-story structure is of pure Gothic style. Handsome and attractive in appearance, its refined and distinctive character makes it a pleasing and conspicuous addition to the many notable buildings in its vicinity.

Located opposite the Public Library, just off Fifth Avenue, in the very heart of what is recognized as the most central and select business district of the City, this new building is easily accessible from every quarter.

The firm's General Offices for the U. S. A., now installed in the new premises, adequately provide for the growing needs of the business. Suitable arrangements insure rapid communication between these offices and their New York Works and Laboratories.

A cordial invitation is extended to the medical profession by Messrs. Burroughs Wellcome & Co., to visit their new Exhibition Rooms at any time to inspect the display of Fine Chemicals, Galenicals and other Products for which the firm has been so long and favorably known.

The researches and experimental investigations carried on so many years by the firm through its laboratories and scientific departments have led to the accumulation of a wealth of special and unique information which is freely available at all times to medical men and scientific workers in general.

The work of Messrs. Burroughs Wellcome & Co. in connection with particular lines of investigation, such as the preparation of portable Medical Outfits, designed to save space for Military, Exploring, Hunting and other expeditions and withstand the trying climatic and atmospheric conditions, has developed a wide variety of equipment, which will always be found at the service of those interested.

**GENERAL MEDICINE**

Edited by Wann Langston, M. D.

State University Hospital, Oklahoma City

**BACILLUS ACIDOPHILUS: RESULTS OF FEEDING MILK CULTURE.—George C. Mizell, M.D., S. M. J., Nov. 1923.**

The author refers to studies made by Bass, who concluded that it is now possible to transform the intestinal flora from the usual mixed type to a simple one, consisting chiefly of *Bacillus acidophilus*, a natural inhabitant of the intestinal canal, especially in young, healthy persons, at the same time greatly reducing proteolytic bacteria, or eliminating them entirely. By transforming the flora it should be possible to determine whether the many symptoms, diseases and conditions, including premature senescence, commonly believed to be due to intestinal intoxication, are really due to it, and if any are proved to be caused in this way, a promising remedy will be at hand.

With these conclusions in mind, the author began a study of the effect of feeding acidophilus milk in two groups of patients. In one were patients in whom the laboratory findings showed chronic intestinal toxemia. In the other, those suffering from chronic intestinal stasis and colitis, but not putrefactive toxemia. The object was to determine the influence of this treatment upon the symptoms and urinary products of intestinal putrefaction. The results obtained were not in accord with Bass.

Bassler and Lutz state that on the fifth or sixth day after feeding *Bacillus acidophilus* milk culture, these organisms represent 90 per cent of the fecal micro-organisms and that the *Bacillus coli* decreased to less than 10 per cent.

Kopeloff and Cheny found that the intestinal flora becomes changed on treatment with *Bacillus acidophilus* whole milk and lactose, but the relative percentage of gram-positive rods rarely exceeds 70 per cent. The author's findings were in accord with the above.

Clinical experience proved that urinary findings were dependable as an index to the putrefactive type of toxemia and that the symptoms of toxemia parallel the urinary findings.

For the purpose of this study a group of ten patients were selected, who were by laboratory tests and symptoms, suffering from intestinal toxemia, putrefactive type, and another group of ten suffering from a chronic colitis and stasis. The symptoms of each group were carefully studied before and during the period of *Bacillus acidophilus* milk feeding in an effort to determine what group of symptoms were due to (1) toxemia and stasis and (2) to stasis alone. The conclusion that certain symptoms were due to excessive intestinal putrefactive toxemia was arrived at by feeding a lacto-farinaceous diet, given below, for one or two weeks, at the end of which time the stools would be non-putrefactive in character; the urine, clear of indican; the patient, free from certain symptoms. The diet consisted of gruels, crackers, toast and butter, butter milk, sugar of milk; malted foods; scrambled egg yolks; macaroni and custards. Afterward the patient was given a general diet of meat, eggs, milk, vegetables, cooked fruits, bread and cereals each day, amounting to 2500 calories. Examination of urine was made at

three day intervals and when indican was again present in the urine in marked degree, with return of symptoms, these symptoms were noted. This procedure also serves the purpose of excluding those having indicanuria from some extra-intestinal source.

The symptoms relieved by a lacto-farinaceous diet and recurring on a general diet were designated as being due to putrefactive toxemia. The milk in the diet was then replaced by 1000 c.c. of acidophilus whole milk. Examinations of urine were made at three day intervals. In the second group the progress was judged by the symptoms and mucus present in the stools.

The author submits the following conclusions:

(1) Relief from chronic intestinal toxemia, putrefactive type, and stasis, even in the presence of intestinal adhesions, has been secured while feeding *Bacillus acidophilus* milk culture in conjunction with a general diet.

(2) Chronic ileo-colon and colon stasis of undetermined origin as well as secondary adhesions may be relieved by feeding *Bacillus acidophilus* milk.

(3) When results are not so secured additional measures of a non-irritating character directed to the relief of the constipation and some modification of diet may render treatment effectual.

**DIGESTIVE HEMOLYSIS AS A TEST OF LIVER FUNCTION AND THE INFLUENCE OF HEPATIC EXTRACT UPON IT.—A. L. Levin, M.D., S. M. J., Vol. XVI. No. 11.**

The digestive hemolysis test proposed by Widal, Abrami and Jancoresco consists in studying the hemolytic crisis after the patient has drunk a glass of milk, given on an empty stomach. The variation in the number of leucocytes, blood pressure, coagulation time and the refractometric index of serum is observed for a period of from one to two hours. The execution of the test is very simple and is based upon the following facts:

1. During the ingestion of a meal of albumins, proteins incompletely changed penetrate the gastric and intestinal mucosa and reach the portal circulation, causing a hemolytic crises.

2. The liver, if its physiological function is normal, exercises an arresting influence upon those substances and prevents hemoclasia—proteopexic function.

Widal and his associates have conducted numerous experiments upon sick and healthy individuals and no crisis was noted in healthy individuals or even in sick ones where there was reason to believe that the liver was not involved. But in a majority of cases of liver involvement, a positive hemolytic crisis was obtained.

To further prove that the protein in milk and not the carbohydrate or the fat produces the crisis, they tested individuals who gave a positive reaction with milk by feeding them 50 gms. of lactose or 30 gms. of melted butter, and a negative result was obtained.

The hemoclastic crisis appeared in all diffuse parenchymatous injuries of the liver, as in catarrhal icterus, cirrhosis, syphilitic hepatitis, passive congestion of the liver, in the acute affections as pneumonia, typhoid and paratyphoid fever, in appendicitis, severe tuberculosis, nephritis with uremia, in poisoning, especially alcoholism, after chloroform anesthesia and arsphenamin injections,

also during pregnancy. Patients with gastrointestinal disturbances such as amebic dysentery, catarrhal enteritis, entero-colitis with hyperchlorhydria and hypermotility, etc., were one would suspect that there is an easy passage of incomplete albumin products across the mucous membrane, the liver being normal in its protecting power, the reaction was negative. According to Widal, when the crisis is complete all the elements which constitute it follow synchronous developments. Often, however, one may see a dissociated crisis in which the leucopenia is not accompanied by arterial hypotension or by a modification of blood coagulability. Sometimes the crisis instead of developing into a continuous curve, takes place by steps and one sees an alternate series of decreases, then increases, of the amount of white globules. This is noted in patients to whom a minimum dose of nitrogenous food was given or in whom the proteopexic insufficiency was on its decline. The most important and most constant element in the test is the leucocyte variation which may be diminished by a half or two-thirds. Very important facts are brought out in the course of study of cases with digestive shock following a meal such as chills, fever, urticarial or herpetic purely sanguine and very probably due to a hemolytic crisis. Another important fact is that it is possible to render a temporary immunity by giving the patient a small quantity of protein shortly before a meal, to prevent a hemolytic crisis from taking place. The unexplainable cases of disturbed digestion are probably due to a diminished proteopexic function of the liver and a digestive hemoclasia producing the toxic symptoms after a meal.

In reviewing the literature on the subject, the author finds that most observers agree with Widal and are enthusiastic over this simple test to determine hepatic insufficiency. Paul Holzen and Erich Schilling (Berl. Wochen., 58: 1352, November 14, 1921) have tested the reaction in 60 cases with the following results, thus:

- (1) In normal individuals there is always a digestive leucocytosis.
- (2) In infectious diseases, it is now positive and now negative.
- (3) In cardiac livers it is positive.
- (4) It is always positive in every manifest liver disease.
- (5) Peptone or plasmone (milk casein soluble in hot water) will produce the reaction in liver cases.
- (6) It is negative in reticulo endothelial icterus.
- (7) The Widal test for protein digestion and the Bauer galactose test for carbohydrate both should be used.
- (8) In gastric acidity or subacidity leucopenia often occurs.

They conclude that since in manifest liver diseases subacidity is frequently found, it may be conceived that possibly the Widal reaction may depend upon imperfect splitting of protein in the stomach and intestines.

1. W. Wolfe (Schweiz. Med. Wochenschr. Basel, August 1922) tried the test on 95 cases and comes to the following conclusion:

- (1) This test for liver insufficiency is dependable where other methods have failed.
- (2) The variation in leucocyte formula is the essential element and speaks for a disturbance of liver cells.

(3) It effects particularly the neutrophiles. The behavior of the lymphocytes is not uniform; a pronounced eosinophilia can be expected with certainty in severe cases of anaphylactic shock.

(4) The method makes it possible in cases of urticaria, asthma and Quincke's edema to discover the elementary etiology and give rational treatment by gradual desensitization.

(5) The amino acids alone are responsible for the crisis, due to a disturbed capacity for synthesis in the liver cells.

#### INTRAVENOUS USE OF DIPHTHERIA ANTITOXIN.—Howard Osgood, M.D., J. A. M. A., Vol. 81-17, Oct. 27, 1923.

The author summarizes his work as follows:

Fifty-four patients with laryngeal and nasofacial diphtheria were given intravenous injections of antitoxin in addition to intramuscular injections. Stock concentrated antitoxin issued by the laboratory of the New York State Department of Health was used. Only cases classed as severe on admission were selected for intravenous administration. The antitoxin was given undiluted in or diluted in sterile physiologic sodium chlorid solution.

The indications for an intravenous injection may be thus outlined: It should be given in:

1. Late cases (the patient being ill four days or more without antitoxin) whether moderate or severe in type.
2. Severe and malignant causes, whether discovered early or late in the disease.
3. Laryngeal cases secondary to faucial involvement.
4. "Bull-neck" cases and those with hemorrhage.
5. Cases that do not respond to an ample intramuscular dose.

Contra-indications are:

1. Cardiac decompensation or severe organic lesion of the heart or blood vessels.
2. Chronic nephritis.
3. Horse serum or protein sensitivity, unless the patient can be successfully desensitized.

The following precautions should be observed:

1. Use only a clear, amber or colorless serum with high titer (1,200 units per cubic centimeter or over). The importance of this must be emphasized.
2. Inject very slowly at body temperature.
3. Stop the injection if untoward symptoms appear.
4. Keep the patient warm, quiet and under close observation afterward.
5. Determine protein sensitivity.

(a) If the patient has had no previous serum injections . . . caution; a preliminary intramuscular dose should be given.

(b) If the patient has had any serum injections in the past (six days or over) . . . caution; an intradermal test should be performed and the patient desensitized.

(c) If the patient has had antitoxin within from four to six days . . . safe; skin tests or preliminary intramuscular doses are not necessary before the intravenous injection.

## CONCLUSIONS:

1. The careful selection of a proper lot of antitoxin, the observance of certain precautions against allergic shock, and care in the technic of administration renders reasonably safe the injection intravenously of a stock, concentrated diphtheria antitoxin.

2. Some patients with severe and late diphtheria will be saved by this procedure who otherwise would probably have succumbed.

3. Certain complications and sequelae may be prevented; or, if not, will be lessened in severity.

4. A combination of intravenous and intramuscular doses is advantageous.

5. In very severe and late cases, the mortality will continue to be high in spite of this treatment, as serious damage will have been done to the tissues before antitoxin is given.

6. Further experimental work should be done to define more clearly the possible dangers of this procedure.

## GENERAL SURGERY

Edited by G. A. Wall, M. D., F. A. C. S.  
303 Palace Bldg., Tulsa

## OLD MASTERS.—Garrison; History of Medicine.

Henri de Mondeville (1260-1320) was a hardy and original thinker, endowed with great powers of wit and sarcasm, who made a brilliant last stand for the principle of avoiding suppuration by simple cleanliness, as originally taught by Hippocrates. The surgical treatise of Mondeville, begun in 1306 abounds in directions of the rarest common sense for aseptic treatment of wounds. He advised to simply wash the wound clean and put nothing into it, since "wounds dry much better before suppuration than after it." Wine and other "wound drinks" were given to strengthen the patient, in opposition to the routine practice of cutting down his diet. For hemorrhage he recommends styptics, digital compression, acupressure and torsion of the isolated vessel by means of a sliding-needle ligature. His biting wit was shown in his many utterances. He says, "Many more surgeons know how to cause suppuration than to heal a wound."

Again he says, "Never dine with a patient who is in your debt, but get your dinner at an inn, otherwise he will deduct his hospitality from your fee."

His rapacity in the matter of fees shows that they were hard to get in the Middle Ages (as they are now—Ed.) and what he says about the subject suggests the type of surgeon who had to succeed by dint of hard knocks.

## SIR D'ARCY POWERS SURGICAL APHORISMS

"Till old experience doth attain

To something like prophetic strain."—Milton.

1. Eyes first and much, hands next and little, tongue not at all.

2. It is useless to ask about the family history in a case of intestinal obstruction, yet many do so.

3. In appendicitis, trust to the physical signs rather than to the symptoms. Local tenderness remains when the appendix has perforated or is

gangrenous, even though there be no abdominal tension. Many have died when the surgeon has trusted the pulse and temperature when he ought to have examined the abdomen.

4. In appendicitis, the most sure way to convert a mild into a severe attack is to give aperients and mask the pain with morphia. In these cases, if the bowels must be opened, administer an enema. If pain is to be deadened give aspirin.

5. There should be no third day in appendicitis. The patient should be on the highway to recovery either naturally, or because the appendix has been removed.

6. In appendicitis beginning suddenly, there is a rise in temperature; in acute perforation of the stomach or duodenum, the temperature falls.

## TETANUS.—Yearbook 1922. P. 88.

Freedlander records four cases in which success was had by large doses intravenously. In one case he gave as high as 213,000 units. In a boy he gave 755,000 units. From the literature and an experience with three cases successfully treated, it appears to Smith that antitoxin has definite value when given intravenously in sufficient dosage. In determining the dosage the severity should be taken into consideration. The intravenous is the method of choice and in acute cases should always be employed. It may be advisable to give 5,000 to 10,000 units into the spinal canal at the same time the initial dose is given. The prophylactic dose should be at least 2,000 units. Statistics from the War go to prove it is of great value in prevention, but that delayed tetanus did occur in many cases in which it was used, adds evidence that the prophylactic dose of 1,000 to 1,500 units was not sufficient. As a prophylactic it should be used more generally in all lacerated and penetrating wounds and especially in compound fractures. As a prophylactic not essential to give it intravenously but subcutaneously.

The time should come when all employers will urge its use.

## FRACTURES OF THE HEAD AND NECK OF THE RADIUS.—Grossman, J. Surg. Gyn. and Obst. (abstract). Aug. 23, 1928.

The author reports a series of 150 fractures of the elbow in which there were 16 fractures of the head and neck of the radius, or of both, and points out that the latter condition is more frequent than is generally recognized.

He recommends reduction, immobilization with the elbow in acute flexion, and early baking. Motion should be delayed until the fluid has disappeared from the radio-humeral joint.

When the fragments are too small or the fracture is so gross that conservative treatment is impracticable, operative interference is necessary.

(The editor has recently had such a fracture in a young man caused by hitting a man in a fistic encounter. The whole head of the radius was comminuted, and the man had no use of the arm.

The comminuted particles of bone were removed by operation and the man made a prompt recovery. In one month's time he had perfect use of the arm with complete flexion and extension. The interesting thing in this case was the manner in which the injury was brought about, and the surprising thing was, that he had no dislocation at the wrist or elbow joint.)

**WOUND OF FEMORAL ARTERY AND VEIN.—**  
 Grover and Courtney. *Annals Surg.*, July 1923.  
 P. 84.

These authors state that wounds of large blood-vessels are comparatively rare occurrences in civil life. The idea that perforation of a large blood-vessel meant sudden death unless immediately checked has long been dispelled by a formidable array of case reports showing recovery to be the general rule, even in long standing injuries. Immediate fistulous communication and clot formation covering it have been life preservers.

They give the history and treatment of a case of gunshot wound of the leg in which the femoral artery showed a longitudinal rent 3 cm. in length and was laid open across its entire diameter and the accompanying vein was also torn. The accident happened ten weeks before admission. The man was operated on by the authors: They tied the artery and vein which spurted blood freely when cut down on, but this was controlled by a tourniquet, which stopped the flow from the femoral artery. The artery and vein were doubly tied with No. 3 chromic catgut, proximally and distally, and the injured portions removed. The patient made a nice recovery, and three weeks following operation, the man walked freely and without pain or limp; the popliteal and dorsalis pedis arteries were not palpable. Five months after operation he was following his daily vocation and had forgotten all about his wounded leg.

This case shows that the method of treatment obtaining the best results is ligation of the artery and vein. Others may maintain that end-to-end anastomosis or vein graft have advantages over ligation, but this is doubted, since it means freeing of the artery from its bed for several inches, and tension in bringing the ends together. Such a procedure may be preferable in dealing with the popliteal artery, but in the case of the femoral, the literature is too replete with recoveries following ligation to admit of any other method. Even in cases in which infection has taken place, gangrene is so rare following ligation of the femoral, that one can hardly bring himself to believe that end-to-end anastomosis is preferable. The question arises should a vein be ligated whether injured or not. Halstead, Neuhooff, St. John and many French and English surgeons, conclude that there is less danger of gangrene if this is done.

Immediate operation is not necessary, since the patient either bleeds to death at once or survives. The immediate danger is acute dilatation of the heart due to the fact that the blood is unable to get by the large thrombus. If the wound is not operated on within the first 36 to 48 hours, the surgeon may take his leisure in performing it. Other causes besides bullet and stab wounds of large blood vessels, are fracture at the hip or shoulder, accidental wounds in operating on hernia, carcinoma, etc., and one case is reported of wound of the iliac, due to removal of a drainage tube following removal of a ureteral stone low down.

**ANKYLOSIS AS A TRUE CURE OF DESTRUCTIVE JOINT TUBERCULOSIS.—**Bracket, E. G.  
*S. M. J.*, Sept. 1923. P. 697.

The author's idea in presenting the paper was to bring into discussion some of the more severe cases of joint tuberculosis. The problems as presented in the early and late stages are entirely

different. In the early stage the problem is to preserve the function in a joint attacked by a destructive disease, while in the second stage the disease has already destroyed the essential structures and the problem is to obtain the best substitute for a lost joint, considering safety and practicability. In order that the joint be restored to a useful status, the disease must be arrested in its early stages. In the past much controversy has arisen between the advocates of traction on one hand and fixation on the other. The most important consideration deals with the decision as to, in which cases, the best time to apply methods which have stood the test of time and experience, rather than blindly adhering to any special method. In the acute stage there is no treatment to which the disease responds so quickly, as to that of definite and accurate traction. Again in other cases with slight or absent symptoms, traction is not demanded, but rather fixation may be sufficient. Keep in mind that the ultimate object is to obtain an early arrest of the disease, before the destructive process impairs the integrity of the joint.

There is but one result which can be considered a safe and absolute cure of tuberculosis disease, which has passed into the destructive stage, viz:—bony ankylosis in the desired position. The joint which has healed with a few degrees of motion is under constant liability to repeated strain, giving frequent periods of disability. Experience has shown that such a joint fails to respond to the strain upon it in later life and is a source of danger. The patient is brought to the choice between limited activity and radical operation.

We know that an actual cure by ankylosis can take place hence we must not satisfy ourselves by meeting the present condition, rather than having in mind the future life of the individual. The object should be in these destructive cases, an end result of bony ankylosis, at the earliest possible period, and when bony ankylosis is not taking place the question of operation to bring about this result should be considered. The object of operative treatment in caries of the spine is different from ankylosing operations in all other joints, for the reason that it must give an added mechanical support and thus aid nature to bring about those desired conditions which favor ankylosis, without interfering with the diseased area, while in other joint disease the area is directly attacked. In children the environment must play an important part in determining the method to be employed, since under rest, protection and hygiene and time, a cure may result: When all these can be provided, conservative treatment should be employed. The indirect but important and sometimes serious results of long conservative treatment are too often lost sight of until too late and the lesson which intrudes itself, is the need of clear foresight, trusting that by early recognition of these facts we may arrive at a decision in regard to the treatment, which will not have too much the flavor of a compromise.

**DIAGNOSIS ACUTE ABDOMINAL CONDITIONS.—**Clack, J. M. *S. M. J.*, October, 1923.  
 P. 799.

The diagnosis of an acute abdominal condition, brought on by disease or injury not always easy, but not so difficult to say it is, or is not surgical. Traumatism is capable of producing the greatest need for immediate surgical intervention. The

author considers the acute condition first, from injury and secondly, from disease. A differential diagnosis between penetrating and non-penetrating wounds is important. The general symptoms of penetrating wounds of the abdomen give very little reliable information, in differentiating between simple penetrating ones and those complicated by visceral injuries. Shock may be present in non-penetrating wounds and be absent or not well marked in cases of intestinal perforation. If pallor exists and there is a history of an abdominal injury of any magnitude, with signs of fluid in the abdomen, the diagnosis of internal hemorrhage should be confirmed by a laparotomy. Pallor is sure to exist following penetration and the surgeon cannot be sure that the bowel is not injured.

Disappearance of liver dullness is a valuable diagnostic sign: Pain is unreliable. Hematemesis, hematuria and blood in the bowel movements are diagnostic points, but no one should wait for these if there be danger in delay.

Many fatal injuries of the abdomen have no external signs, such as contusion and laceration of the skin and muscles. When you have a history or a blow or a kick or any form of traumatism to the abdomen, without visible evidence of wall injury, your consideration is as much demanded as if there were contusions and lacerations, provided, you have symptoms of internal injury.

All penetrating wounds demand exploratory operation to complete the diagnosis: The same is true in non-penetrating when there is shock, pallor, acute anemia, shallow respirations, feeble pulse and distended abdomen with pain.

The milder cases should be kept under observation. Conservatism in abdominal conditions caused by trauma, should depend on exact diagnosis followed by immediate treatment. The appendix is estimated to be the cause of 75 per cent of all acute intra-abdominal conditions, and early diagnosis of acute appendicitis a life saving procedure, for as long as we have late cases we will have a great per cent of deaths, hence we should practice and preach early diagnosis. Early cases will nearly all get well, while 25 to 40 per cent of late cases stand a good chance to die.

The author goes on and gives the various points for the diagnosis of an acute appendicitis. These are standard and will not be repeated here. The blood count is of value but not sufficient to make a positive or negative diagnosis. The author cites two cases, one of pneumonia and one of pleurisy operated by mistake for acute appendicitis. He gives the symptoms of acute pancreatitis, perforating gastric and duodenal ulcer and differentiates between them and acute appendicitis.

Ruptured tubal pregnancy is mentioned and he gives as the prominent signs, pain, shock and acute anemia. (He fails to mention the blood picture which is highly diagnostic in this condition. In these cases the leucocyte count goes as high as 30,000 following a ruptured tube—Ed.) Masking the symptoms by narcotics is gratifying to the patient, but renders diagnosis more difficult.

## EYE, EAR, NOSE and THROAT

Edited by Jas. C. Branswell, M. D.

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**SOME FURTHER OBSERVATIONS ON THE ETIOLOGY AND TREATMENT OF MAXILLARY SINUSITIS.**—Dutrow, H. V.: *Ann. Otol., Rhinol. & Laryngol.*, 1923, xxxii, 398.

Dutrow is of the opinion that the majority of the infections of the maxillary sinus are of the ascending type. This belief is contrary to the ideas of the past as the antrum has often been considered a reservoir into which pus drained from the other sinuses.

Destructive intranasal surgery should never be resorted to until after the antrum has been treated for a period sufficient to determine the value of any form of local treatment and sufficient time being allowed to elapse for the structures within the nose to return to normal.

In chronic empyema with granuloma, thorough removal of the disease within the sinus, adequate drainage, and constant ventilation are essential for good results.

Absence of deformity, the preservation of the physiological structures, and marked improvement in the general condition fully justify the proper radical surgical intervention in this type of sinus infection.

**CONCERNING THE SURGICAL TREATMENT OF GLAUCOMA WITH SPECIAL REFERENCE TO A MODIFIED ELLIOTT-LaGRANGE TECHNIQUE.**—Vail, D. T.: *Arch. Ophth.*, 1923, lli, 346.

Vail thinks that the best results are obtained in acute glaucoma by a von Grafe iridectomy, in sub-acute glaucoma by a Smith iridectomy, and in secondary glaucoma by removal of the cause supplemented by paracentesis or iridectomy.

Glaucoma simplex is attributed to arteriosclerosis. It is wise to operate when eserine fails to control the tension.

The author trephines the sclerocornea, performs the iridectomy in the usual way, and makes a 3-mm. incision to the left and right of the trephine opening, parallel with the periphery of the cornea. The trephine hole does not close before the two lateral incisions. This operation gave good results in nineteen cases in which it was used and failed only twice.

**MYRINGOTOMY FROM THE STANDPOINT OF THE PATHOLOGY OF EARLY OTITIS MEDIA.**—Alden, A. M.: *Missouri State M. Ass.*, 1923, xx, 169.

Myringotomy performed by a skilled otologist on the proper indications is without danger and practically always successful.

When the inflammatory process begins in the pharyngeal end of the eustachian tube, the resulting congestion and swelling causes a negative pressure in the middle ear cavity because swallowing or mastication does not open the tube. This allows the drum to be forced inward by the outside air pressure. The negative pressure causes the drum to become swollen and the external

surface red. A continuation of this process can cause transudate to collect in the middle ear. This stage is treated by applying an ice bag to the external ear and adrenalin to the pharyngeal end of the tube.

The second stage is gradual and negative pressure changes to positive, pain is severe, bulging of the drum. Then the drum should be opened preferably under nitrous oxide.

#### TREATMENT OF HEMORRHAGE FOLLOWING TONSILLECTOMY BY LIGATION.—John F. Callahan. *Laryngoscope*, xxxiii, 1923, 675.

The author thinks that the only correct surgical treatment of hemorrhage following tonsillectomy is tying the vessel and stopping the hemorrhage. Local applications to the bleeding point such as caustics and astringents may stop the hemorrhage for the time being but the bleeding is likely to recur within a very short time and due to the destruction of the tissue as the result of caustics and astringents it is more difficult to stop the hemorrhage. The method of applying one or more hemostats to the bleeding point and allowing them to hang out of the patient's mouth for five or more minutes is very unpleasant and often fails to accomplish the desired result as soon as the hemostat is removed the hemorrhage is likely to recur. The method of placing deep sutures through the pillars cannot be commended.

Callahan uses a hemostat modified after the Boettcher model to pick up the bleeding vessels and then ties the vessel with No. 13 twisted silk before removing the hemostat. Silk has been used by the author for a number of years in ligating vessels in the fossa and ill results from its use have not been noted. The silk allows the use of more tension than catgut.

#### ON THE USE OF RADIUM TO INDUCE ATROPHY OF THE FAUCIAL TONSILS—Histologic Evidence. Walter A. Wells, *Laryngoscope*, 1923, xxxiii, 681.

The failure of X-rays to produce satisfactory results with the tonsils is to be attributed to the impossibility of concentrating a sufficient dosage on the organs without doing damage to neighboring or intervening structures.

Radium can be introduced into the center of the tonsils where its greatest influence is exerted, lessening toward the periphery. The study of the tonsil shows it to be made up of lymphoid cells which are susceptible to the effects of radiation.

The author does not advocate this method for the complete removal of tonsils but considers radium a valuable adjunct if the surgeon wishes to reduce the size of the tonsil. The atrophy, while varying with individual types of tonsils, will be in general proportion to the amount of radium and duration of exposure.

#### A NEW PLASTIC PROCEDURE FOR THE CLOSURE OF PERFORATIONS OF THE NASAL SEPTUM. John D. Lewis, *Laryngoscope*, 1923, xxxiii, 671.

The author advocates the following technique for closure of perforations of the nasal septum: Two parallel incisions as wide and long as the available tissue will permit are made through the

healthy mucoperichondrium and connected anteriorly by a vertical incision. With a knife and sharp curettes, a triangular segment, including the mucoperichondrium and septal cartilage, is removed. The anterior third of the flap is then detached to facilitate introduction of the sutures, after which the elevation is completed and the flap is drawn downward into its new position by traction on the sutures.

When the septal perforation is high, the plastic must be cut from below and move upward.

The denuded area from which the plastic is taken heals by granulation from the margins.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
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#### RESULTS OF TONSILLECTOMY IN THE TUBERCULOUS.—Walter Camp, M. D. Minneapolis. Reprint from the *Journal Lancet*, March, 1922.

Tonsillectomies were performed, under local anesthesia, on a carefully selected group of patients in the Glen Lake Sanatorium. They were guarded from hemorrhage, shock and exhaustion and kept in bed from two weeks to three months afterwards.

Seventy-two per cent showed general improvement afterwards, although many were improving under regular sanatorium regime. Two cases of chronic arthritis cleared up promptly. Twenty-eight per cent of the operations had no apparent effect on the course of the disease.

None of the tonsils showed clinical evidence of tuberculosis, but 67 per cent microscopic evidence varying from an occasional tubercle to massive involvement of the whole tonsil.

While the path of tonsillar infection has not been clearly proven, the author believes most of his cases indicate an auto-infection from the sputum. All the patients, but one showing infected tonsils, had bacilli in the sputum at the time of operation. He believes from a study of these cases that pulmonary tuberculosis is not a contra-indication for tonsillectomy when that operation is indicated.

#### CALCIUM THERAPY IN TUBERCULOSIS.—Editorial in the *A. M. A. Journal*, June 21, 1923.

It has long been observed that persons who work in lime dust have a certain resistance to tuberculosis. This fact has lead many clinicians to adopt the use of calcium in combatting tuberculosis, with apparently good results in many cases. Werner administered calcium lactate by mouth to twenty children with tuberculous peribronchial lymph nodes, and studied them, with an equal number of controls, by the fluoroscope. He believed that the treated patients showed more calcification of the nodes and a greater improvement in health than did those who did not receive calcium.

The normal amount of blood calcium represents about the maximum that the blood can carry, so we could hardly expect to be able to increase the amount of calcium intake except where there is a deficiency in blood calcium, and it has not been proven that this is true in tuberculosis.

An experimental study was made by Maver and Wells. The first analyses were of normal laboratory animals to establish controls. A dose of calcium lactate equivalent to 25 to 30 gm. for an adult person was administered daily for varying periods of from 15 to 288 days. Various tissues were then examined. It was found that the use of calcium had not generally appreciably increased the calcium content of the tissues and no recognizable difference was found between the tissues of animals that had received calcium for long or for short periods. Twenty-four other guinea-pigs were inoculated with a culture of tubercle bacilli; of this series, twelve received calcium from the day of inoculation, the other twelve received no calcium. Eighteen of these animals, evenly divided between calcium fed and controls, died within 135 days. Examination of the two separate lots of tissues showed that the use of calcium did not reduce the spread of the tuberculous lesions, or lead to a greater calcification of infected tissue.

This study covering a long period of time and involving numerous observations, failed to prove that the use of calcium exerts any appreciably favorable influence on the course of tuberculosis.

**A SYNDROME SIMULATING PULMONARY TUBERCULOSIS.**—A. L. Hart and W. A. Gekler, *The American Review of Tuberculosis*, Sept. 1923.

Three cases are reported which came under the authors' observation diagnosed elsewhere as tuberculosis whose real condition was a combination of mitral stenosis and hyperthyroidism. They presented the usual symptoms of pulmonary tuberculosis, fever, cough, hemotysis, rapid pulse, loss of strength and weight. Very careful study was necessary in each case to make the correct diagnosis.

**ASSOCIATED DISEASES IN PULMONARY TUBERCULOSIS.**—H. C. Sweany, *The American Review of Tuberculosis*, Sept. 1923.

There is a discussion of the diseases associated with pulmonary tuberculosis, and a warning to physicians to eliminate all complications before diagnosing a sputum negative case as tuberculosis or before calling a sputum positive case nothing but tuberculosis.

While sanatorium treatment usually does no harm and much good, it has many disadvantages and a wrong diagnosis may be the cause of needless worry and expense.

Three rather extreme cases are reported illustrating the authors' points.

He considers decision as to proper treatment a very delicate problem of correct evaluation of the various symptoms of tuberculosis and complicating diseases.

**TUBERCULOSIS OF THE INTESTINES.**—H. Schwatt and M. M. Steinbach, *American Review of Tuberculosis*, Sept. 1923.

Numerous autopsy reports are given with the findings carefully analyzed. The authors' experience is that tuberculous ulceration occurs in 60 to 90 per cent of cases of lethal phthisis and that the prognosis in advanced cases is always bad.

They find that there is no pathognomonic symptom or group of symptoms and that the intestinal disease usually runs a completely latent course irrespective of the extent or severity of the ulceration.

In a certain number of cases this condition is associated with diarrhea or diarrhea alternating with constipation, colicky pain, tenderness to palpation, blood in the stools and signs of enteroperitonitis. None of these symptoms or groups of symptoms is of any value in indicating the location of the lesion. The location and severity of the lesions appear to have little to do with the symptoms, but toxemia, amyloidosis and catarrhal conditions of the mucus membrane appear to play important parts.

The value of the X-ray in the diagnosis of this condition remains to be determined.

The treatment consists in relief of symptoms so far as possible. Calcium chloride intravenously has been most effective in some cases in relieving diarrhea, the most distressing and stubborn symptom. Operative interference is not justifiable.

This condition is more frequently recognized at autopsy than during life because of the complete lack of symptoms in most cases.

#### COD LIVER OIL IN TUBERCULOSIS

M. I. Smith of the Hygienic Laboratory of the U. S. Public Health Service at Washington, has carried out some experiments in an effort to ascertain definitely if cod liver oil has any beneficial effect on the progress of tuberculosis.

Although cod liver oil appears to have a definite, though slight, effect on the non-tuberculous guinea-pig, especially when the guinea-pig is maintained on a diet deficient in vitamin A, it has not shown itself definitely beneficial when used with guinea-pigs infected with tuberculosis, nor has there been any evidence of a deposition of calcium in the tuberculosis of the guinea-pig when calcium was used along with the cod liver oil.

These experiments, while perhaps not sufficient to rule out all possibilities of beneficial results to be obtained from the use of cod liver oil in tuberculosis, they at least warn against the placing of too much dependence upon its use.

**EXPERIMENTAL OBSERVATIONS ON INTRA-TRACHEAL AND INTRA-NASAL INJECTIONS IN RABBITS.**—H. A. Robin and H. C. Sweany, *The American Review of Tuberculosis*, Sept. 1923.

A series of experiments was conducted upon rabbits testing the therapeutic value of carbonaceous material in tuberculosis, and attempting to improve the methods of intra-pulmonary therapy.

The authors were able to produce massive infiltration by aspiration without an anesthetic. The material aspirated in this manner tends to gravitate to the dependent portions of the lung. Dry soot when insufflated produces a uniform anthracosis throughout both lungs and tends to encapsulate the tubercle, but apparently does not inhibit its growth, nor tend to produce fibrosis. The authors believe that some benefit might be obtained from this method of intra-pulmonary therapy should a suitable tuberculocidal agent be found.

When light anesthesia was used with the animal lying head down on a board tilted at 30 de-

grees, no carbon was aspirated, but much was found in the lungs after deep anesthesia. They believe this demonstrates that depth of anesthesia and posture of patient play very important roles in the production of bronchiectasis and aspiration pneumonia so frequently following tonsillectomy.

**A STUDY OF THE LIMITATION OF CHEST MOVEMENT, CHEST THICKNESS AND MUSCLE SPASM IN THE DIAGNOSIS OF TUBERCULOSIS AND THEIR RELATION TO PLEURISY.**—Arthur M. Hoffman, *The American Review of Tuberculosis*, Sept. 1923.

This study made on 200 individuals either patients or workers, at Trudeau Sanatorium, was undertaken to evaluate certain physical signs and to afford a standard by means of which the true value of these signs could be judged.

The following points were studied: (1) Relation between limitation of chest movement (or lagging) and the side and amount of tuberculosis. (2) Correlation of muscle spasm to side and amount of tuberculosis. (3) Relation of thickness of chest to side and amount of tuberculosis. (4) Relation of chest movement to pleurisy. (5) Relation of pleural movement (diaphragmatic excursion) to chest movement and to pleurisy.

Limitation of chest movement is most reliable in advanced cases and least in initial cases where diagnostic aid is most needed. This is also true of muscle spasm. Diminution in thickness of chest wall cannot be depended upon to indicate the side of involvement. There was a direct relation between limitation of chest movement and pleurisy as seen by x-ray in 50 per cent of this series of cases. Diminution of pleural movement and limitation of chest movement corresponds in side in 41 per cent of the cases. In only 12.8 per cent was there a definite correspondence between the limitation of chest movement, diminution of pleural movement, and basal pleurisy on the same side of the chest.

**INFLUENCE OF VARIOUS SYMPTOMS IN THE PROGNOSIS OF TUBERCULOSIS.**—F. B. Trudeau, M.D. *A. M. A. Journal*, March 24, 1923.

From a careful study of 980 patients suffering from pulmonary tuberculosis, the author has given some facts concerning the relation of certain symptoms to the ultimate outcome of the disease.

The author first considers the onset which he divides into five types: Catarrhal, insidious, the pleuritic, the hemoptysic and the febrile, which he states plays little or no part in determining the future course of the disease.

In regard to the importance of positive sputum, the author states that only 53 per cent of those whose sputum was positive are well and working as compared to 79 per cent among the cases with negative sputum.

While hemoptysis is considered by most clinicians a very grave symptom, the author's figures show that 61 per cent of the hemoptysic patients are well and working as compared to 65 per cent of the non-bleeding patients, the death rate being practically the same.

The author considers a gain in weight of very great importance in the outcome of the disease and gives the following figures: 67 per cent recoveries and 20 per cent of deaths in those who

gained weight while there were 57 per cent recoveries and 27 per cent deaths among those who lost weight. Those whose weight remained stationary did no better than those who lost.

The pulse rate is considered very important in the prognosis. Only 49 per cent of those having a tachycardia are well and working and 38 per cent dead, while 69 per cent of those with a negative pulse are well and working with only 16 per cent dead. The author considers the high pulse rate significant because it is often accompanied by fever, which he considers one of the gravest symptoms of all. By "fever" he means a temperature of 99.5, or over, which persists for five consecutive days which cannot be explained by any other cause than tuberculosis. The figures show that the per cent of deaths and recoveries are about the same among the febrile cases, while among the afebrile cases 68 per cent are well and working and only 17 per cent dead.

The death rate was slightly higher among the males. Family history seems to have no prognostic value. Seventy-eight per cent of the incipient cases have resumed normal life while only 25 per cent of the far advanced cases recovered.

The following are abstracts of brief reports on the work of the New York State Commission on ventilation. These investigations were carried on at a cost of fifty thousand dollars and the findings are of vital interest, especially with reference to school room ventilation.

**THE NEW YORK COMMISSION ON VENTILATION: ITS ORIGIN AND SCOPE.** Albert G. Milbank, *Journal of Outdoor Life*, Jan. 1923.

This Commission together with Public Health Commission appointed by former Governor William Sulzer of New York, was unique in that it worked without appropriation from the state and was quite out of politics.

This Commission undertook the study and investigation of a relatively unexplored field of public hygiene, that of the ventilation of schools, theatres and other public buildings. Much elaborate equipment for forced ventilation exists, along with many opposing opinions as to its value.

The Commission believes that it has demonstrated that fresh air is purchasable and that within reasonable limits of cost the quality and quantity of the air supply of any place of assemblage can be determined. It believes this one of the cheapest and most effective ways of purchasing public health.

The members of the Commission are: Dr. C. E. A. Winslow of the Yale Medical School, Dr. Frederick S. Lee of the College of Physicians and Surgeons of New York City, Dr. James Alexander Miller of the College of Physicians and Surgeons, Dr. Earl B. Phelps of the United States Hygiene Laboratory, Dr. Lee Thorndike of Columbia University and Mr. D. D. Kimball, ventilating engineer of New York City.

The entire report has been published by E. P. Dutton and Co.

**THE PHYSICAL FACTORS CONTROLLING HEAT LOSS FROM THE HUMAN BODY.**—Earl B. Phelps, *Journal of The Outdoor Life*, Jan. 1923.

The human body is a machine which consumes fuel, develops power and wastes heat. This loss

of heat is a necessary condition for its efficient operation. It takes place (1) by conduction; (2) by convection, and (3) by evaporation. If the air temperature is 97 degrees or above, heat loss by conduction and convection is negative and the body utilizes evaporation by means of perspiration. If the relative humidity is 100 degrees it means cessation of heat flow by this means. If these two conditions were to coincide it would lead to great discomfort and heat prostration.

Hot weather conditions are met by the use of lighter clothing, cooling drinks, fans, etc. In cold weather when the heat flow would be greater than the normal requirement, we use heavier clothing, housing and artificial heat.

A fourth physical factor, radiation, is especially important in regard to artificial heating.

These are the physical factors forming the basis for the scientific study of ventilation. The modern problem of ventilation is that of controlling these conditions, especially in crowded public places, in the interest of comfort and health.

#### THE VENTILATION OF THE SCHOOLROOM.—

D. D. Kimball, M. E. *Journal of the Outdoor Life*, Jan. 1923.

The practical aspects of this problem were studied with 5500 pupils during 507,000 pupil days with three types of ventilation: (1) Open windows without fans at low temperature; (2) Open windows without fans at moderate temperature; (3) Plenum fan ventilation with closed windows at moderate temperatures.

It was found that the use of open windows without a suitable means of exhaust was impractical. The use of open windows with deflecting boards, radiators extending the width of the windows and gravity exhausts gave the most satisfactory results. Ventilation by means of plenum fans and gravity exhaust gave better aeration but required higher temperatures for comfort owing to the greater volume and rapidity of moving air. They found the window ventilated rooms more comfortable at 67 than the fan rooms at 69 and characterized by materially less respiratory disease.

The chief difficulty in the use of window ventilation has been to maintain the interest of the teachers in its proper use. Skillful and proper attention to the operation of the system is absolutely necessary to the success of any type of ventilation.

#### THE PRACTICAL SIGNIFICANCE OF THE WORK OF THE N. Y. STATE COMMISSION ON VENTILATION.—C. E. A. Winslow. Dr. P. H. *Journal of the Outdoor Life*, Jan. 1923.

The clear demonstration that the effects of bad ventilation are mainly due to overheating, excess of humidity and lack of air movement are of greatest importance. If the dangerous effects of overheating can be impressed upon the public, the efforts of the Commission will be justified. This is especially important in regard to schoolroom ventilation where a system of modified window ventilation was found to reduce respiratory illness materially.

If the facts demonstrated by the Commission can be incorporated into the various state laws it will result not only in a reduction of educational appropriations but also in respiratory disease.

#### AIR FROM THE STANDPOINT OF PHYSIOLOGY.—Frederick S. Lee, *Journal of The Outdoor Life*, Jan. 1923.

While the popular conception the air once breathed is loaded with impurities which adversely affects the body is true to a certain extent, recent physiological research has proven that "good" or "bad" air is not wholly a question of chemical composition but more particularly dependent upon physical features such as temperature, humidity and motion.

It has now become known that the ability of the body to adjust itself to extremes and changes in air temperature has been somewhat over estimated. In conducting experiments upon normal young men it was observed that a change of 12 degrees air temperature induced a change of about one degree body temperature. The pulse is slower and the blood pressure lower in cool dry air than in warm moist air. A similar conclusion was reached in relation to the performance of physical work, the average totals days work accomplished by the men was 28 per cent less in the warmer than in the cooler air. With none of these physical phenomena, body temperature, blood circulation and ability to perform work, does the chemical composition of the air seem to have any influence. It was found, however, in a series of experiments testing the appetite for food, that appreciably more food was eaten on fresh than on stale air days.

It is concluded that a moderately cool, dry atmosphere supplies a healthful environment and one most conducive to physical efficiency.

#### THE INFLUENCE OF ATMOSPHERIC CONDITIONS UPON RESPIRATORY DISEASE.—James Alexander Miller, A.M., M.D. *Journal of The Outdoor Life*, Jan. 1923.

In studying the relationship, long recognized in medicine, between respiratory diseases and atmospheric conditions, it must be borne in mind that infection is the primary agent and that atmospheric influences are secondary. The effects of atmospheric conditions in acute respiratory diseases are seen mainly in their influence upon the beginning of the disease. In chronic diseases they are mainly of interest in their influence upon the treatment.

The tend of these experiments is to show that the effect in both cases is more physical or mechanical than chemical. It is the reaction of the body to its environment which is of fundamental importance.

In conducting experiments upon normal young men it was shown that exposure of the body to heat caused increased redness, swelling and secretion of the nasal membranes and that cold diminished these conditions, producing an anaemic, contracted mucus membrane favorable to the incidence of infection. These experiments were verified by another set made upon rabbits. The effect of the cold was seen only when the head of the animal was exposed and not when the body alone without the head was in the cold. This would indicate that local chillings are not important in the production of these diseases. It was shown again in the experiments with drafts that the mucus membranes were not effected unless the cold air

was blown directly upon the face. None of these men developed even a common cold, thus emphasizing the necessity of bacterial invasion.

In studying the incidence of acute respiratory diseases in school children subjected to known atmospheric conditions, it was shown that there were 70 per cent more cases of respiratory sickness among children present and 18 per cent more absences from these causes in the fan than in the modified window ventilated rooms.

One of the outstanding achievements of the Commission is the scientific support given to many ideas used in general practice and it is hoped that physicians and sanitarians will gain much through a careful study of the complete report.

**VENTILATION, WEATHER AND THE COMMON COLD.**—A study of the prevalence of respiratory affections among school children and their association with school ventilation and the seasonal changes in weather. George T. Palmer, Detroit. Reprint from the *Journal of Laboratory and Clinical Medicine*.

This study was conducted jointly by the Bureau of Child Hygiene of the New York City Department of Health and the New York State Commission on Ventilation. The author was chief of the investigating staff. The study was made during eight weeks in the Spring of 1916 and twelve weeks in the Winter of '16 and '17. Observations were made on the health of 5500 school children exposed to three types of ventilation in 12 buildings. The types of ventilation used were: (A) Cold, open window and gravity exhaust, (B) cool, open window and gravity exhaust, (C) cool, window closed, plenum fan ventilation and gravity exhaust. These experiments were most carefully controlled in regard to the type of pupil, location of school, etc.

It was found that the mean temperature for both studies for the various types of ventilation were: Type A, 59.0 degrees; type B, 66.4 degrees; type C, 68.4 degrees.

The relative humidity ranged from 38 per cent to 46 per cent and did not vary greatly in the three classes.

The nurses' notes on freshness and odor showed the A, or the coldest rooms as the freshest. The B room were the most odorous in both studies. The B rooms were fresher than the C rooms, but more odorous.

The carbon dioxide contents did not vary greatly.

In the first study the temperature was judged satisfactory about 77 per cent of the time in all types. There were more sessions judged too warm in A and B, although C temperatures were higher. This was not true in the second study where the A rooms were judged too cool 26 per cent of the time and satisfactory 70 per cent, type B was satisfactory 80 per cent and C 85 per cent of the session.

It was found that for every 100 cases of respiratory illness in the B rooms, there were 152 cases in the A rooms and 231 in the C rooms.

All these results are thoroughly analyzed and carefully tabulated in the report. The sickness rates are analyzed in the individual rooms and schools and separated into those causing absences and those among children present.

In the study of the relation of outdoor weather to colds, it was shown that colds decrease as the weather becomes warmer in the Spring and increase with the colder weather in the Fall. Changeable weather does not have any marked influence upon colds.

The author concludes that there appears to be something inherent in plenum fan ventilation which produces respiratory infections, it may be the higher temperature and uniformity of temperature and air flow. The absence of the stimulating effects of a varying atmosphere evidently affects the health as well as the comfort. The temperature may be reduced as low as 59 in the window ventilated rooms without increasing colds. While window ventilation is not always satisfactory or practicable, the results of this study show it to promote comfort, health and efficiency in all instances where it is possible to use it.

### *BACTERIOLOGY and PATHOLOGY*

Edited by Wm. H. Bailey, A.B., M.D.

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**THE DIFFERENTIAL LEUCOCYTE COUNT IN CHRONIC PERIAPICAL DENTAL INFECTION.**—Russell L. Haden, M.D., Kansas City, Mo. (*Journal of Laboratory and Clinical Medicine*, August, 1923.)

#### Summary:

The results of the study of the white cell count and differential count in 200 patients is presented; 100,000 white cells have been counted.

Patients with periapical abscesses show a slightly higher total white count than those having no abscesses. The difference is somewhat more marked in those patients suffering from systemic disease of focal origin.

The increase is, for the most part, in the polymorphnuclears, although all types show some increase.

Patients suffering from chronic periapical dental infection do not show typically a lymphocytosis.

We have found no evidence of an unusual type of white cell or tinctorial reaction in chronic dental infection.

The differential count is of little practical value in determining whether a patient is absorbing toxins or bacteria from possible foci about pulpless teeth.

Patients for this experimental work were divided into five groups:

1. Patients showing in radiograph definite evidence of one or more infected teeth.

2. Patients showing in radiograph no evidence of infected teeth.

3. Patients with no evidence of systemic disease of focal origin. (Seventeen showed definite areas of rarefaction in dental radiograph, 28 had no pulpless teeth and 18 had pulpless teeth showing no evidence of infection.

4. Patients with infected teeth and systemic disease of focal origin.

5. Patients with systemic disease of focal origin which was reproduced in rabbits by bacteria isolated from periapical foci.

**THE ROENTGEN RAY VERSUS VACCINES IN THE TREATMENT OF ACNE.**—Howard Fox, M.D., New York. (*Journal of A. M. A.*, Oct. 27, 1923.)

**Summary:**

The roentgen ray has now been used for many years in the treatment of acne. While its therapeutic value in this disease was early recognized, its dangers were also apparent. Good results were possible to obtain even with the old unmeasured technic, when used by men of special skill. Since the introduction of accurate methods of measurement, the technic has been greatly simplified: In the hands of a careful operator, using modern apparatus and measured dosage, the roentgen ray is now as safe as it is efficient. The results in the treatment of acne are more permanent than with any other therapeutic agent.

The introduction of vaccine therapy in acne occasioned considerable enthusiasm for a period of years. After an extensive trial of this method, the majority of dermatologists have either wholly or partly given up its use. Good results have undoubtedly been obtained by a few investigators after patient efforts with special technic. In the hands of the majority, the results in the general have been unsatisfactory. The weight of opinion is that mixed vaccines (of both acne bacillus and staphylococcus) are of more value than those of acne bacillus alone. Stock and autogenous vaccines are considered by the majority to be of equal efficiency. Whatever value these vaccines may possess is restricted to their use in selected cases, chiefly of the pustular type, or as an adjuvant to other methods of treatment. The action of vaccines is slow, and improvement is often temporary. In the treatment of acne vulgaris, the roentgen ray is far superior to vaccines.

**SUMMARY OF THE PRESENT STATUS OF THE TREATMENT OF TRICHINIASIS.**—M. E. Alexander, M.D., Waterbury, Conn. (*Amer. J. of Med. Science*, April 1923.)

**PROPHYLACTIC:** This is still, and ever must be, the most important treatment of this disease. It may be considered under the following headings:

1. Inspection of meat.
2. Prevention of infection in hogs.
3. Proper cooking of pork.

The systematic microscopic examination of pork for trichinae has been tried extensively in this country and in Germany, but it was given up as impractical and uncertain. It was pointed out that the expense was enormous and that it did not seem to afford protection. During the years of 1881-1898 when Germany had a very rigid microscopic examination of pork there occurred 2042 cases of trichiniasis with 112 deaths from meat that had been examined and released for trade as free from trichinae. It illustrates how encrusted trichinae may escape detection.

The investigations of the various processes of curing meat have not been completed. Inasmuch as smoking and salting would kill the trichinae in the superficial layers only, it could not be depended upon to penetrate the deep layers of the ham.

Ransom of the Bureau of Animal Industry and of the Department of Agriculture, has demonstrated that if a barrel of meat at 32 degrees F. be put in a refrigerator at 5 degrees F. it takes

about seven days before the center of the barrel is of the same temperature as that of the refrigerator. A temperature of 5 degrees F. or below will destroy the trichinae if exposed to it for about two weeks.

The federal meat inspection authorities, in view of this fact, have ordered that all pork that is to be used in the preparation of food products and consumed raw must be kept exposed to a temperature of 5 degrees F. for at least 20 days or else it must be heated to about 60 degrees C. or 140 degrees F. Ransom also points out the length of time it takes for heat to penetrate large portions of meat. In cooking a 15 pound ham in water at 180 degrees F. it required two and a half hours to raise the temperature of the center of the ham from 78 to 137 degrees F. and it required three and one-half hours to raise the temperature of the center of the ham from 46 to 136 degrees F.

The extermination of rats and mice near slaughter houses and hog pens must be insisted upon. Examination of rats from slaughter houses show that at least 50 per cent of them have trichinae. Whether the rat or the hog is the normal host of the trichinae has not been established. However this may be there is no doubt that rats help to carry the infection. For this same reason hogs should not be fed on slaughter house waste or dead hogs. Rats and mice should be so disposed of that hogs will not come in contact with them. The proper cooking of pork is the most certain and safest of precautionary measures. An ordinary sausage requires ten minutes cooking in water to raise the center of sausage from 78 to 137 degrees F. It is evident that pork is often insufficiently cooked. Especially when large hams are used. All persons must be educated to the danger of eating pork insufficiently cooked.

**MEDICINAL TREATMENT:**

This is still unsatisfactory and is entirely symptomatic. The serum of animals convalescent from trichiniasis has been used with indifferent results. If the patient is seen soon after eating the infected meat it may be possible to abort the disease by gastric lavage, by administering a cathartic and by giving large doses of thymol. Thymol has also been used by intramuscular or subcutaneous injection. Glycerine, on account of its hygroscopic qualities, is recommended, a tablespoonful every hour with laxatives.

Arsphenamin and other arsenicals have also been employed but without effect.

No immunity is conferred by one attack of trichiniasis and no immune substances can be demonstrated in the serum of experimentally infected animals.

**STUDIES OF GRAVES SYNDROMES AND THE INVOLUNTARY NERVOUS SYSTEM.**—Leo Kessell, M.D. and Harold Thomas Hynman, M.D., New York. (*American Journal of Medical Sciences*, April 1923.)

**CONCLUSIONS:**

1. A study of the clinical manifestations of autonomic imbalance is presented.
2. Such instability of the involuntary nervous system probably constitutes a diathesis.
3. Focal infection, psychic trauma and the sex epochs accentuate the syndrome.
4. The symptoms are strikingly similar to those in Graves syndrome: Autonomic imbalance may coexist with myxedema.

5. Local manifestations in a single organ, such as the stomach or heart, may attract attention to the organ itself, instead of to the general disturbance of the involuntary nervous system.

6. Hyperplasia of the thyroid gland is a very frequent accompaniment of the syndrome. It is more likely secondary than causative.

7. There is never present in autonomic imbalance a distinct and continuous elevation of the basal metabolism. This serves as a crucial differential point from Graves syndrome.

8. The recognition of clinical autonomic imbalance is simple. More important, however, is (1) the exclusion of Graves' syndrome and (2) the determination of the exciting cause of imbalance.

9. There are no scientific data that substantiate the participation of the ductless glands in the production of this syndrome.

10. While the patients with autonomic imbalance usually are sensitive to either atropin or adrenalin, it is possible to have the syndrome without drug sensitiveness; also it is possible without active autonomic imbalance to have drug sensitiveness. The explanation of these facts on a pharmacological basis is recorded.

11. Clear cut sub-grouping of these patients into vagotonic and sympathicotonic should be made clinically until some definite information with regard to the tonus of the involuntary nervous system is forthcoming.

12. Autonomic imbalance can rarely be permanently arrested. Usually the symptoms may be alleviated, but the diathesis persists.

13. Hormone therapy is without foundation and, practically, it is useless.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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#### 1. Orthopedic Principles.

From Arthur Keith's, "Menders of the Maimed."

John Hunter was born in 1728 and his career was spent before the development of the microscope, the knowledge of oxygen, of combustion, of respiration, or oxidation of the tissues. He always thought in terms of living structure, tissues, and organs, rather than that of living cells and studied the evolution of function rather than form. Function rather than structure is of chief interest to the Orthopedist and John Hunter's works are very valuable even though written before the revolution of scientific medicine in the 19th century.

One of his most important contributions was that of his clear recognition of the fact that restoration is effected by powers inherent in the living tissues of the patient: The surgeon can only help recovery by tending these powers. He believed that Nature is the master surgeon. He cured stiff joints by movement, and he preferred voluntary to passive movement.

Hunter was greatly interested in the function of muscles. He noticed that the muscle works within definite limits; it can contract under the domination of the will until the shortest limit allowed by the extension or flexion of the joint is reached; it can elongate to the farthest limit permitted by the flexion or the extension of the joint.

But if a tendon be cut, or a bone broken, the muscles could and did contract beyond the shortest limit of voluntary contraction, but he knew and demonstrated that by repeated effort, the will could come to dominate a muscle in all positions of extreme contraction. Therefore voluntary motion is worth much more than the passive motion and massage.

In regard to joints, he held that nothing can promote contraction of a joint so much as motion before the disease is removed. He believed in the alternating heat and cold treatment for joints. He saw that when a joint became the seat of injury or disease, the muscles which acted on the joint became rapidly reduced in size and strength. He thought this wasting due to a "sympathy" which linked them with the joint on which they act. Now we call it reflex.

#### 2. Congress of Surgeons.

The American College of Surgeons held their 13th annual session on Friday, October 26th and proved to be very valuable meeting from the clinical standpoint. A great deal of Orthopedic work, including fracture and other bone work was presented at all of the large hospitals. Any surgeon, whether Orthopedic surgeon or not, must have gained much information along Orthopedic lines, if he took the trouble to attend any of the clinics where this work was being done.

At St. Lukes Hospital, Dr. John L. Porter gave a very practicable clinic on plaster work demonstrating numerous practicable points in the application of plaster casts. Some of the more insignificant, although helpful features were that of putting on an ordinary bathing cap over the head when applying plaster jackets, that of placing a small rope along the front of the jacket when it is to be removed immediately after application, the object being to cut along the line of the rope thus protecting the skin, and that of making indelible marks on the skin, outlining a brace for the spine so that when the plaster model is made the indelible marks show exactly where the parts of the brace are to fit. At the same hospital the following day, Dr. E. W. Ryerson, Dr. H. B. Thomas and Dr. Lewin showed some rare interesting cases. Dr. Ryerson is doing the Spinal Ankylosis operation in scoliosis due to paralysis and is satisfied with the results. He uses the Hibbs method of mascerating the spinous processes and curetting the lateral articulation over the whole length or of the dorsal curvature, thus immobilizing the part of the spine which includes the deformity. He showed one case of ununited fracture of the tibia of nine years' duration in which he had recently done a bone graft and there was apparently solid union. He also showed three children in one family which had congenital dislocation of the hip and pointed out the fact that there nearly always remains a slight limp, even though the best results are obtained and that one should not be disappointed because of the limp.

At the Mercy Hospital, in the Clinic formerly occupied by the late J. D. Murphy, Dr. Kruescher showed a great variety of bone and joint cases. One of the most interesting cases was that of myositis ossifications in a girl about fifteen years old. Practically every muscle contained calcium deposit. Many of them, including the pectorals, and muscles about the shoulder girdle being almost entirely ossified. In fact, the ossification was so general that it could almost be said that

the girl was turning to stone. Dr. Kruescher also demonstrated some ingenious technique in regard to various operation about the knee joint.

At the Cook County Hospital, Dr. Kellogg Speed demonstrated various procedures in open reduction of fractures. Dr. Hugh McKenna at the Wesley Memorial Hospital demonstrated a fracture table which appeared very practical and had some very important features which seemed to be lacking in other tables. Dr. McKenna is using the metal plates in open fracture work but follows strictly the Lane technique. His instruments are not touched by any one after they leave the sterilizer until they reach his hand.

Dean Louis, D. B. Phemister, and Vernon David, at Rush Medical College, demonstrated some instructive cases in regard to end results of periphial nerve injury. A number of cases were operated with the new anaesthetic, ethylene gas, which was discovered by Dr. Luckhardt at St. Lukes Hospital, and is thought to be a much better anaesthetic than gas because it produces complete relaxation with less toxemia.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
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#### **AN EFFICIENT TREATMENT FOR RESISTANT CASES OF PYELITIS.—J. Spencer Davis, Archives of Pediatrics, Oct. 1923.**

For the past ten years the author has used injections of whole blood unaltered by anticoagulants in the treatment of these cases which did not yield to medication. The blood was usually obtained from one of the parents and immediately injected into the abdominal wall. The work begun was begun before blood grouping was generally done and intravenous transfusion was not resorted to for some time. The smallest quantity of blood which would prove effective was found to be 20 c.c. In the severer type of recurrent infection this was found to be inadequate and larger quantities up to 100 c.c. had to be given. The greatest number of injections used has been five, but in many cases a single injection was all that was necessary. After the injection no medication was given.

In some cases it was noted that the patient would have a chill a few hours after the injection followed by profuse perspiration and a fall in temperature, frequently to normal. But even when the temperature did not reach normal the child would be greatly improved clinically, sleep better, and take its food better. Sometimes the chill was absent and the temperature fell by lysis. If the temperature did not reach normal in thirty-six hours, a second injection was given. If the blood is unaltered by anticoagulants there is very little pain to the injection and it is rapidly absorbed. When injected deeply only slight discolorization is noted from the hemolysing red cells. Compatible citrated blood was used intravenously but the only difference in effect noted was a slightly more prompt response, and an occasional chill from the transfusion.

In a few hours after injection there was a rise in the leucocyte count, if not already high. In some cases it rose from 10,000 to 30,000, reaching its height in from six to twelve hours, followed by a gradual decline. The rise did not appear to de-

pend on the quantity injected, 20 c.c. producing a leucocytosis equal to 100 c.c. in others.

In cases showing improvement, the number of bacteria in the urine decrease without necessarily any decrease in the number of pus cells. The latter were found in decreasing numbers after the child was clinically well.

Out of a group of fifty cases, thirty-five were selected and followed from three to five years. These were all severe cases, many of which had had several attacks. In only one was there a recurrence. This occurred about two years after treatment and developed a perinephritic abscess.

#### **THE SYMPTOMS AND TREATMENT OF THYMUS HYPERTROPHY IN INFANCY.—Rowland G. Freeman, Archives of Pediatrics, Oct., 1923.**

Enlargement of the thymus gland is accompanied by characteristic and often dangerous symptoms. This enlargement and the symptoms which accompany it are usually readily controlled by the x-ray according to the writer.

The literature on the subject is reviewed, showing that sudden death was associated with thymic hypertrophy, by Morgagni, as long as 250 years ago. The writer considers that the symptoms characteristic of thymus enlargement are convulsions, asthma, cyanosis, stridor, and breath holding followed by weakness or unconsciousness. Any of these symptoms should raise a suspicion of this condition.

Neither the symptoms nor the result of the treatment can be explained. The gland consists of two types of cells, the lymphatic—which predominate—and the epithelial cells which arrange themselves in concentric fashion to form Hassall's bodies. The normal gland should weigh from three to seven grams. A gland weighing fifteen grams or over is considered abnormal. It does not seem to grow in normal persons and atrophies in adult life. There is no definite evidence of internal secretion.

Schloss and Liss took x-ray pictures of 119 infants just after birth. Fifty showed a large thymic shadow, thirty-four a small thymic shadow and thirty-five no thymic shadow.

Enlargement of the thymus gland may, in some cases, be determined by percussion over the upper part of the sternum or in the second costal interspace on either side of the sternum. This can sometimes be elicited by light percussion. In other cases enlargement has been determined by palpation in the supra-sternal notch. The most reliable test is obtained by the use of the x-ray.

The fluoroscope shows the shadow of the thymus gland in the first and second interspaces. This increases on expiration and diminishes on inspiration.

In comparing x-ray pictures taken at different intervals it makes a difference whether they were taken at the end of inspiration or at the end of expiration.

Treatment was formerly surgical but this has been superseded by x-ray treatment which is safe and reliable.

The writer reports a series of thirteen cases ranging in age from two months to four years. The symptoms were varied and consisted of such things as holding the breath with unconsciousness, cyanosis, stridor, crowing sounds, convulsions and

asthma. X-ray pictures showed enlargement of the thymus in every case. In one case there was a palpable tumor. The symptoms were relieved in practically all of the cases after one or two treatments with x-ray. Radium was used on one case with good results. When subsequent pictures were made they showed a diminution or absence of the thymus shadow. The writer recommends that the treatment should be continued until no thymus shadow is seen, even tho the symptoms have been relieved.

**THE ETIOLOGY AND TREATMENT OF HERPETIC (APHTHO-ULCERATIVE) STOMATITIS AND HERPES LABIALIS.**—H. J. Gerstemberger, *American Jour. Diseases of Children*, Oct. 1923.

Herpetic stomatitis and apthous stomatitis are considered by some authors as separate diseases and by others as the earlier and later stages, respectively, of the same disease. Uncertainty exists among the various writers on the subject as to cause of the disorder and the effectiveness of the various therapeutic measures advised. Practically all authors agree that improvement takes place, more or less spontaneously, within from one to two weeks. It is pointed out by some writers that in poorly nourished individuals serious bowel disturbances will occur during the course of the stomatitis if the utmost care is not observed in improving the condition of the mouth.

Toxin absorption, direct bacterial action and poor personal and general hygiene, either alone or combined, have been given as etiological factors.

Various bacterial groups have, by different men, been associated with the development of the diseases. These are rejected by others.

Recent clinical observations have led the author to believe that the underlying etiological factor is a disturbance of metabolism or nutrition and that bacteria or similar agents play only a secondary part.

Two children apparently healthy, living under excellent hygienic surroundings developed herpetic stomatitis. They had been on a nourishing diet containing plenty of proteins, fats, carbohydrates, minerals, iodine, fat soluble A and fat soluble D vitamins. A 3 per cent solution of silver nitrate was used locally for forty-eight hours without results. Since they had not been eating oranges, except occasionally, it was concluded that these lesions might belong to the formes frustes of scurvy. Local treatment was stopped and they were given the juice from two oranges in the daily diet. Within twenty-four hours there was no more discomfort and at the end of forty-eight hours the lesions had disappeared. Practically the same results were obtained in two other cases, one of which had Bednar's aphthae and had resisted local treatment.

In order to determine the effect of water soluble B vitamin alone, yeast vitamine tablets were then used, containing each 200 mg. of standardized vitamin fraction. Nine patients received this treatment. They ranged in age from one to ten years. Along with the herpetic stomatitis some showed either marked gingivitis, ulcerative stomatitis, Vincent's angina or herpes labialis. The dosage depended on the severity of the condition and the age of the patient, ranging from two tablets three times daily to four tablets every three

hours. They all showed improvement in from eighteen to forty-eight hours. The majority of them showed improvement at the end of twenty-four hours. In from two to four days the stomatitis showed marked improvement or was entirely cured in practically all cases. The gingivitis responded more slowly but was either markedly improved or cured in most cases. The yeast vitamine therapy was also tried in a case of herpes labialis and one of herpes zoster inguinales—both in adults. The results were very good.

Where there was constipation, a cathartic seemed to facilitate the therapeutic effect of the yeast vitamine therapy.

The author concludes that the administration of the water soluble B vitamines produces in herpetic stomatitis, apthous stomatitis, herpes labialis, acute gingivitis, and ulcerative stomatitis, a remarkably rapid improvement and recovery.

### CURRENT COMMENT

By The Editor,  
Dr. Claude A. Thompson, Muskogee

Which has nothing, or nearly so, to do with matters medical, but which reflects current opinion, belief and comment upon the order of the day, whatever or wherever it may be. Contributions are invited from our members.

### BACK TO THE WOODS

After two and a half years in Washington, with a title of Brigadier-General, a title which many a deserving colonel in the regular army never attains, to say nothing of a little country homeopath, Dr. Sawyer must pack up his "old kit bag" and march back to the woods. This comes at the moment when his greatness was in full bloom; he now has very little chance of becoming President of the United States.

During our President's illness we were treated to some rare dissertations on pathology; Dr. Sawyer took into full account the ignorance of the public when he explained everything in the terms of a country doctor, including every phrase except "overheating the blood." His reports were far from being very professional; moreover, his idea of copper poisoning from crabs was unique; was he not confused with mercury? His bulletin that the President had broncho-pneumonia with a temperature of 100 deg. F. and that the "sailing was clear" on the second day was remarkable. An easy sea, as it were, but we now know that Mr. Harding had arteriosclerosis, cardiac hypertrophy and chronic nephritis for a long time, and in view of this fact, no matter what his illness might be, one would naturally give a guarded prognosis. No one can foresee death and it cannot be prevented; without a doubt the President had every care. However, we cannot forget Dr. Sawyer; his little battle with the American Legion; his un-military bearing.

It is about time that we discontinue making a Brigadier-General out of the Presidents physician. One of the first things the army did in the late war was to teach medical officers how to eat soup properly; to say the least, these lectures are tiring and it requires more than soup-training to make a Brigadier-General. R. W.

—Medical Review of Reviews, October, 1923.

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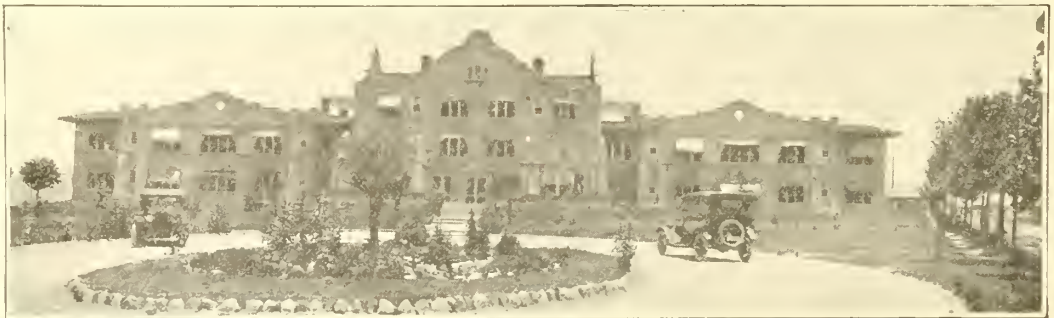
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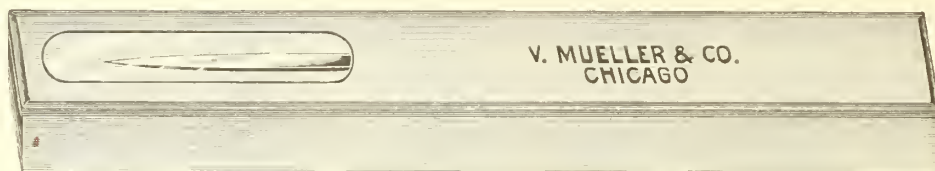
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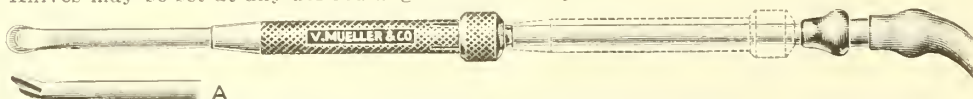


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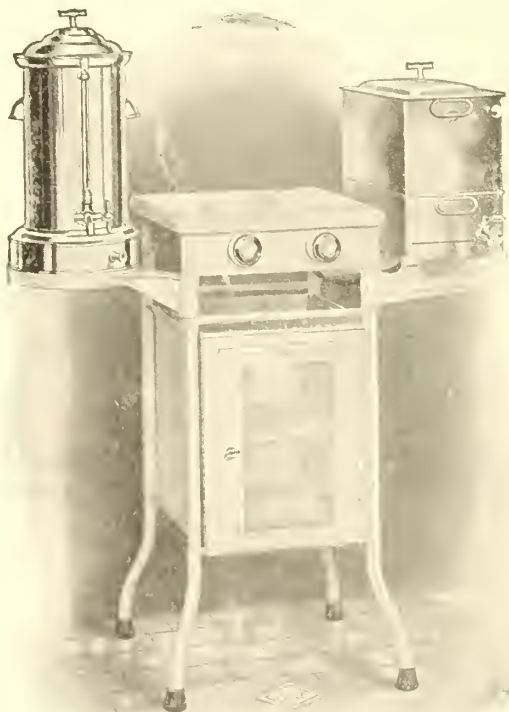
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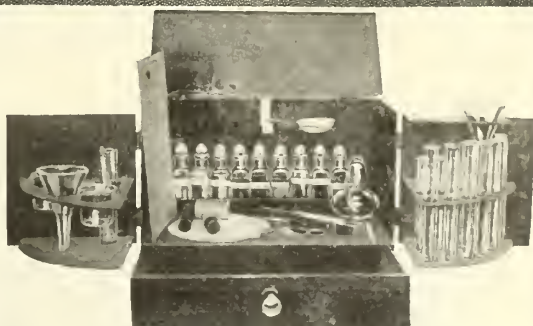
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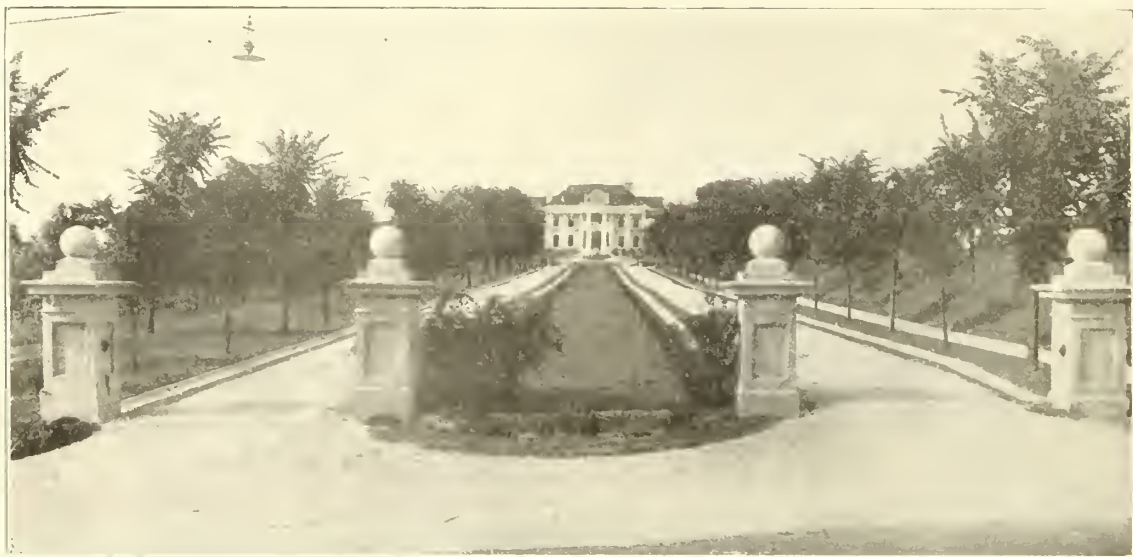
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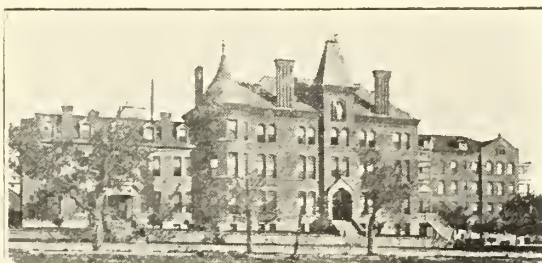
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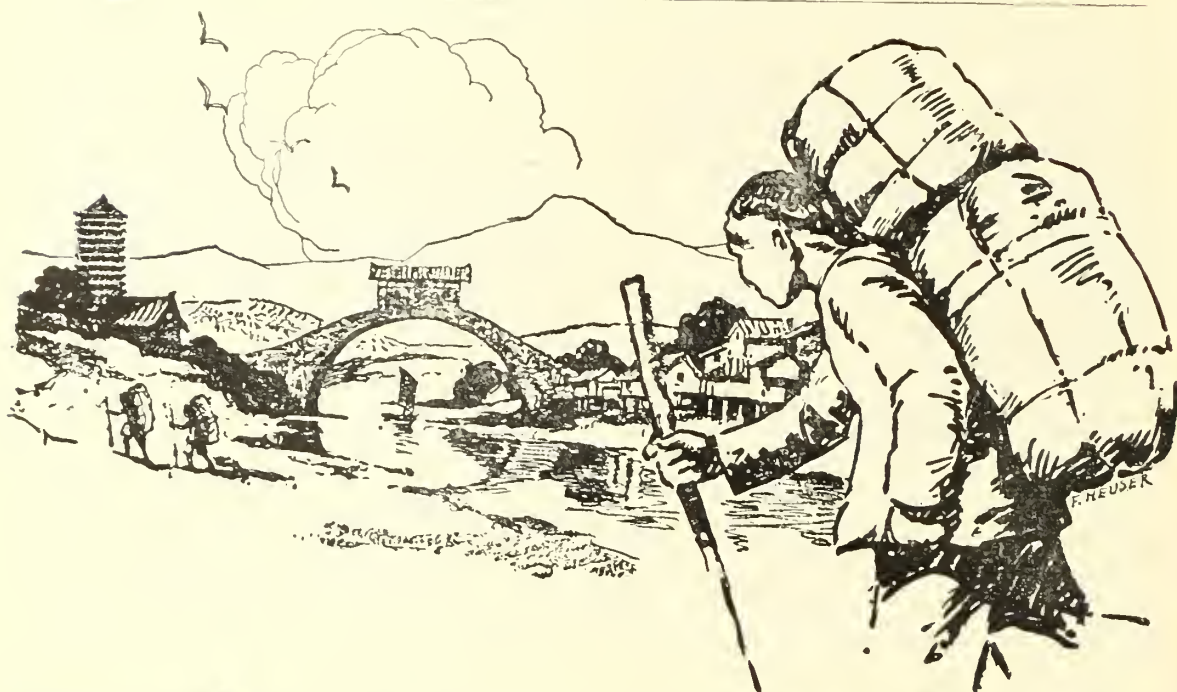
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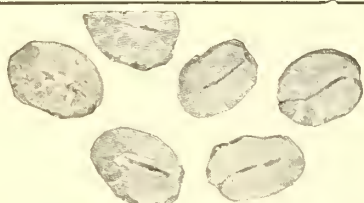
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VOLUME XVII - 1924  
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### NEUROSES AND THE INTERNAL SECRETIONS\*

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The term neurosis, while it has a broad application, is often abused and an unsatisfactory use of it is frequently made by the physician. Misuse of the term and the sense of dissatisfaction that may accompany such a diagnosis is occasioned by an inability to establish an anatomical basis for the symptomatology that is presented. It will be the aim in this paper to show that a pathological anatomy does exist in the neuroses, based on the intimate relationship between the ductless glands and the nervous system and that dysfunction of these glands give rise to a host of disturbances of the nervous system commonly diagnosed neuroses. These disturbances comprise motor and sensory symptoms and trophic and psychic symptoms, which in turn cause disturbance of those structures supplied by the impaired innervation. And conversely, disorders of the internal secretions are caused by disturbance of the nervous system.

The content of this paper may be considered as being comprised of certainties, probabilities and possibilities. Certain definite conclusions have been arrived at and as summed up by Robeson are, the life of every individual is dominated largely by his ductless gland chain. Certain of these glands assume a preponderating influence on the morphology, physiology and pathology of the individual giving rise to certain tropisms such as the pituitary, thyroid, adrenalin, etc., type of individual. Certain diseases, acute and constitutional are welded to these glandular tropisms and are a part of their distinctive pathology, either functional or organic, such as acromegaly, Basedow's and Addison's disease. My attitude then in presenting this subject is not that of giving you proved and established medicine but to stimulate interest in a newer field by offering these observations for your discussion.

The endocrine system will be considered

as consisting of the thyroid, parathyroid, thymus, suprarenal, pancreas, hypophysis, pineal, gonads and prostate glands. That these glands are closely interrelated is indicated by the following facts. Removal of the thyroid checks the growth of the gonads, the same is true with the destruction of the pituitary. Suprarenal loss is generally accompanied by genital aplasia and anomalies. The close relationship of the thyroid and the pituitary is shown by the fact that removal of one causes hypertrophy of the other. Glycosuria in hyperthyroid states is explained by the possibility that sugar mobilization and release are brought about by the modified action of the thyroid and pancreas, the latter being influenced thru the action of the thyroid on the sympathetic fibers of the liver. The activities of these glands are controlled by the vegetative system just as the muscular activities are governed by the sensory-motor system. In view of this fact the vegetative system will be considered a little more fully.

Differentiation anatomically of the vegetative from the sensori-motor system is not at all easy because of the proximity of their nuclei in the brain and cord and the fact that their fibers have many anastomoses. The principle difference is in their periphery. The sensori-motor system has a neurone interposed between the nerve centers and the cross striated muscles. The nerves going from the spinal axis to organs of an involuntary nature have ganglion cells along their course. The system of fibers arising from the middle and lower parts of the thoracic and from the upper part of the lumbar makes up the sympathetic cord. We find then the sympathetic system supplying all involuntary influenced organs, smooth muscle structures, heart muscle, glands, etc., whose nerve fibers are related to the spinal cord from the first dorsal above to the fourth lumbar below.

The fibers which arise from the brain and medulla and from the sacral part of the cord comprise the autonomic cord. It supplies the smooth internal muscles of the eye thru the ciliary ganglion, the salivary glands by way of the chordi tympani, the vaso-dilators of the head by means of the glossopharyngeal, thru the vagus system to the heart, bronchi,

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esophagus, stomach, intestines and pancreas. The sacral segment supplying the descending colon, sigmoid, anus, bladder and genital apparatus. All vegetative organs are then supplied by fibers from both systems with the exception of the pilomotor muscles and the vascular muscles of the viscera, these as far as can be determined are supplied only by the sympathetic.

Physiologically, these two systems are antagonistic in many reactions. That manifestations caused by the electrical stimulation of the fibers of one system may be abolished by stimulating corresponding fibers of the other has been demonstrated conclusively. Altho anatomical differentiation of the two systems is at times most difficult, they react differently to certain pharmacological tests. For instance, adrenalin is a substance that acts solely on the sympathetic system, causing dilatation of the pupil, acceleration of the heart action, inhibition of the movements of the intestines and produces glycosuria and polyuria. Inversely, stimulation of the autonomic, as by pilocarpine, there will be a contraction of the pupil, inhibition of the heart action and contraction of the muscles of the intestines. The name vagotonic has been given to those in whom autonomic activities predominate and sympathicotonic to those individuals in whom the sympathetic excels.

#### CLINICAL APPLICATION

With the constantly broadening field of the neuroses and the psychoneuroses and the new material that is being added a comprehensive definition of either would be difficult to formulate. However, in this discussion a neurosis will be considered as a nervous manifestation generally changing and transitory in character, accompanied with endocrinal reactions, frequently organic changes in the nervous system and more or less mental involvement. The term functional as applied to these conditions has been the cause of much injustice to the patient. It has led the physician to consider the patient who comes to him complaining of easy fatigability, insomnia, vague pains, palpitation, nausea, constipation, sweating attacks, lack of attention, emotional irritability and sometimes depression to be a "neurotic" and the symptoms of psychic origin. The psychopathology as a general rule acts more as an aggravating factor than an etiological one. Then, too, it must be remembered that a double relationship exists between the endocrine system and the psyche and that disturbance of the internal glands can produce mental symptoms. We should not then

call these patients functional but rather look for organic changes.

The examination of these patients should besides the usual thorough physical and neurological routine include careful observation for evidences of endocrine disorder. Sixty to seventy percent of patients with a neurosis have a poor heredity and questioning relative to family history should seek to bring out a history of chronic diseases, nervous and mental conditions, alcoholism, giantism, dwarfism, goiter, diabetes, structural peculiarities, etc. The patient should be observed for evidences of tendencies to these conditions and types. The pituitary type is easily recognized, giantism in youth, acromegaly in adult life and shrinking in old age. There are small pituitary types as well. There may be feminism in the male, he is frequently musical with an abnormal sense of rhythm. He is prone to diseases attended with periodicity and to syphilis. The Charcot joint is a local acromegaly. The adrenal type has a strong masculinity, tends to hypertrichosis and pigmentosis. He is susceptible to diphtheria, hyperchloridria, hypertension and certain forms of pulmonary disease. The female is often masculine in type. The thyroid type presents a bright and intelligent eye, has good clean teeth, takes a temperamental attitude toward life. He is usually free from infectious diseases except measles and typhoid and has a tendency toward cardio-vascular and neurotic disturbances.

As an aid in the diagnosis metabolic factors should be studied, the blood sugar, sugar tolerance and CO<sub>2</sub> quotient. X-ray examination of the sella turcica, pineal region, sinuses and epiphyses often disclose pathological conditions. When indicated the pharmaco-dynamic reactions should be studied. The technic and interpretation of these tests is as follows. If following the subcutaneous injection of one milligram of adrenalin the patient develops a glycosuria in excess of five grams, the quantity of urine doubled and the pulse rate one third above normal the patient is said to be sympathicotonic. This type will have no slowing of the pulse nor a contraction of the muscles of the intestines following the injection of one milligram of hydrobromate of eserine as will the normal individual. If one centigram of nitrate of pilocarpine produces salivation and perspiration more abundant than normal and if one milligram of atropine sulphate produces a rapid and prolonged dilatation of the pupil the reaction is indicative of vagotonia.

The oculo-cardiac reflex which has been the subject of considerable discussion as to its value is elicited as follows. In the normal

condition with the patient in the recumbent position, pressure is made on the eye-balls softly with the fingers for thirty seconds, causing a slowing of the pulse from four to twelve beats, slowing of respiration and a lowering of arterial tension. When the slowing is in excess of twelve beats the reflex is positive and indicative of vagatonia. When there is no reaction or an acceleration of the pulse the test is negative and the patient is said to be sympathicotonic.

The mental status too should be considered. Certain significant reactions can be observed without being a trained psychiatrist. Such as the emotional state, the amount of insight the patient has, his dreams, sleep, the ability to maintain his attention, whether or not there is impairment of memory and of judgment and the attitude the patient takes regarding his illness.

Let us take some of the ordinary symptoms of a neurosis and view them in relation to an endocrinal cause. Probably the symptom most frequently met with is asthenia, a condition of abnormal fatigue. That asthenia of either motor or psychic type can arise from many causes, particularly toxic, is well known but frequently no toxic agent can be associated with it. The first asthenia of endocrinal origin to be recognized was that of Addison's disease. It is known now that asthenia is frequently associated with adrenal insufficiency that is not Addisonian. While the majority of endocrinogenous asthenias are suprarenal it has been shown that the thyroid and pituitary may be at fault.

Headache is common to the class of patients that are called neurotic. The most frequent endocrine origin of these headaches is the thyroid. Generally concomitant signs of hyperthyroidism may be found such as palpebral edema, anorexia, constipation, somnolence, chilliness, muscular and articular pains.

Insomnia is a persistent symptom in the Basedovian syndrome and is also seen at the menopause. It is frequently seen in the psychoses where hyperthyroidism is known to exist. It is reasonable to presume then that an endocrine dysfunction may cause insomnia although the patient may not have a classical thyreotoxicosis.

Anxiety, another frequent symptom in exophthalmic goiter and at the menopause, has also been observed in acquired ovarian insufficiency.

That sweats may be due to thyroid and ovarian disturbance is evident from the frequent sweats seen in Basedow's disease and at the menopause in conjunction with the hot flushes.

Constipation may be caused by excitation of the thyroid and frequently is, generally associated with ovarian and testicular insufficiency. Hypothyroidism may also cause constipation, its persistence in myxedema is well known as well as other forms of hypothyroidism.

Many of these observations have been borne out by pharmacodynamic tests and organotherapeutics. To illustrate how this technic is carried out a rather typical case will be cited.

E. C., a young man thirty years old whose family and early history showed that he had been raised in a goitrous district of western Pennsylvania and several members of his family had goiter. His earlier life had been negative for any serious illnesses and his occupation was that of a printer. For several years he had been subject to attacks of easy fatigability, insomnia, inability to concentrate on his work and the presence of a fine tremor of his hands that did not allow the mechanical precision that his work demanded. These attacks required two or three months of absolute rest before he could resume his work again. On returning to work it would be but four or five months before he would again develop the condition just described.

Physically he was well developed but poorly nourished. The bones of his face were prominent and showed evidence of overgrowth. The skin was pale and moist, hypertrichosis was marked, his sex development was normal but frigid in character. The lungs were negative, the cardio-vascular system showed hypotension and bradycardia but the rate would become rapid on exercise. There was an increase in sugar tolerance and the CO<sub>2</sub> quotient was normal. He showed no sensori-motor disturbance other than an increase of the deep reflexes and a fine tremor of the hands. Mentally he had periods of anxiety and depression that rendered him unfit to do any work.

He had previous been recognized as an endocrine case and given large doses of mixed glands. From this treatment he got relief from some of his symptoms but others were exaggerated and in addition he developed a vertigo, coming on shortly after taking the mixed glands.

From the man's symptomatology he was classed as a vagotonic, that is, his autonomic system was particularly at fault. Furthermore his reaction to pilocarpine was one of abundant perspiration and salivation with an exaggeration of his symptoms. Atropine produced a prolonged dilatation of the pupil and an increase of the heart rate. Large doses

of adrenalin had no effect on his sugar tolerance. The diagnosis then of hyperpituitarism with a concomitant hypothyroid was made. Instead of mixed glands he was given small doses of thyroid, suprarenalin and atropine. The latter was given to check the activity of the autonomic. The man responded readily to treatment making a steady improvement and for six months has not had a recurrence of his symptoms.

Frequently pathological manifestations are observed that are referable to one or two organs, particularly symptoms indicative of disturbance of the gastro-intestinal and respiratory tracts. Knowing as we do the close anatomic and physiologic relationship that exists between the extended vagus system and the internal organs it can readily be seen that impaired function of the autonomic may give symptoms referable to any of these organs.

Cardiac neuroses are frequently observed with the following symptoms, a feeling of pressure in the region of the heart with radiating pains, attacks of bradycardia accompanied by sweating and perhaps vomiting and a variable blood-pressure. Cardiographically showing an incoordination between the auricles and the ventricles. All of which is due to stimulation of the autonomic directly or reflexly and relieved by atropine and adrenalin.

As regards the respiratory tract the classical example of vagus stimulation is bronchial asthma. The irritable condition of the vagus causes a spasm of the bronchial musculature preventing alveolar air from being forced out. It is well known that atropine and adrenalin will relieve this condition as well as the hypersecretion that is frequently present.

Gastric neuroses caused by vagus stimulation may depend secondarily on one of three conditions, increased tone, increased peristalsis or hypersecretion. The symptoms usually met with are, hyperacidity, pain coming on shortly after eating that is relieved by vomiting. X-ray examination of these patients show a marked increase of peristalsis or even antiperistalsis giving rise to the pain and vomiting. The secretory glands are hyperactive causing hyperacidity and is generally associated with hypertonicity. Dreyfus states that in all of his cases of gastric neuroses there is a psychoneurosis and that psychoneurosis is the primary cause of the condition. The administration of atropine gives prompt relief.

Nervous conditions due to increased irritability of the intestines are found more frequently than in any other visceral organ.

The one most commonly seen is the fluid stool lasting from twelve to twenty-four hours brought on by some emotion, bodily exercise or exposure to cold, pain being seldom a symptom. The condition may become chronic due to a secondary inflammatory process of the mucous membranes. The chronic condition is generally a part of the syndrome of Basedow's and Addison's disease. Opium and astringents are generally without effect but adrenalin enemata produce gratifying results.

Spastic constipation, i. e., diminution in the volume of the stool combined with a diminished water content with increased resorption, spasm of the circular muscle and increased secretion of mucous. The condition is probably due to autonomic irritability and is relieved by atropine.

Associated with these condition are the general signs of autonomic disturbance mentioned previously and as a rule dysfunction of the thyroid and adrenals.

To show what can be done for the psychoneuroses and that the cause may not be entirely due to a mental conflict as some would have us believe, the following case is cited.

A. C., a nurse twenty-three years of age, was brought to the hospital in a greatly befogged condition, approaching a delirium. A history was obtained of similar attacks every few months for the past few years. Physically she was slight in stature and build, weighing ninety pounds and was four feet and eight inches high. There was a congenital absence of the vagina and a uterine anomalie. The thyroid was quite prominent and there was some hypertension. Aside from these findings the physical examination at this time was negative. It soon became apparent that her mental condition was one of hysteria and she rapidly recovered from the attack following her admission to the hospital.

Further examination then disclosed a deformed sella turcica and a glycosuria with adrenalin. It was also found that when she was twenty-one years of age she became engaged to a young man being apparently ignorant of her condition and its consequences. The discovery of these facts led to her first attack of hysteria and violent headache. During her stay in the hospital homosexual instincts were noticed to be present.

Because of her undevelopment, the genital abnormalities and the sellar deformity the glands thought to be involved were the pituitary, the gonadal system and a compensatory hyperthyroid. She was given pituitary extract both lobes, ovarian residue and pancreatin. Under this and general treatment

she improved mentally and physically and after a year has not had a recurrence of the attacks.

So it would seem that a concerted effort to discover the endocrine disturbance in neurosis is at least justified. If such a disturbance is found early in the disease the restoration to a normal equilibrium will be much easier and the condition will be prevented from becoming a morbid one from which the patient and the physician may have a hard task to make a complete adjustment.

*Discussion:* Antonio D. Young, M.D., Oklahoma City.

"Neurosis" is a name used to cover nervous disorders in which the pathology is unknown in contradistinction to organic nervous disease. A synonym for neurosis is "Functional nervous disease." Hysteria and neurasthenia are examples of functional nervous disease and progressive muscular atrophy of organic nervous disease. As Dr. Howard stated, much that he said comes under the head of "possibilities" as most of the theories concerning the internal secretions have not blossomed into flowers of fact. We know, of course, that excessive secretion of the thyroid produces a tremor, but there are very few other nervous phenomena that can be definitely ascribed to changes in the internal secretions. At the present time it seems necessary to still hold to the theory that disturbed psychical function, physical and mental strain, and environmental intolerable situations are the cause of most of the so-called neurosis. We certainly know that the origin of "backe ague" is in the mind and that fear can produce diarrhoea, polyuria and cold sweat. Since this is true may not mental upsets cause neuro-circulatory asthenia or hysteria? If financial or domestic worry can cause suicide and murder, is it not reasonable to believe that an equally severe intolerable situation can cause neurasthenia or anxiety neurosis? Cannot strain and danger, as in time of war, functionally disturb the nervous system so much as to cause a more or less permanent fatigability and excitability, causing a person to be so "jumpy" and unstable that his symptom complex amounts to the dignity of a real disease? Do these things, largely psychical, produce structural and functional changes in the endocrines? I do not know but so far it has not been proven.

## THE PARKINSONIAN SYNDROME FOLLOWING ENCEPHALITIS\*

ANTONIO D. YOUNG, M.D.,  
OKLAHOMA CITY

Whether polio-myelitis and epidemic encephalitis are identical has not as yet been established. However, the two diseases have much in common and this fact has caused many observers to believe they are the same, the symptoms varying only because the main lesions are differently situated, anatomically.

"A comparison of the properties of the encephalitis group with the virus of . . .

. . . poliomyelitis . . . show them to have many characteristics in common." (Diseases of the Nervous System, Jellefee and White, Fourth Addition, Lea and Febiger, Philadelphia and New York.)

It has long been known that the various infectious diseases, particularly influenza, typhoid fever and scarlet fever are capable of producing encephalitis; that is, inflammation of the substance of the brain, but it is only since 1918 that attention has been directed to an epidemic variety, of uncertain etiology, and called encephalitis lethargica and epidemic encephalitis. The specific organism causing this clinical entity has not been isolated, hence the disease must be studied from a clinical and pathological standpoint only.

Microscopically, there is meningeal congestion, sometimes hemorrhage exudative inflammatory foci, large or small, may be isolated or widely disseminated through the cerebrospinal axis. In the so-called classic cases, the striatum, locus niger, mid brain and hypothalamic regions are the seat of the foci. The foci show the vascular dilation, diapedesis, exudative proliferation, changes similar to the acute encephalitis, as in influenza, poliomyelitis, rabies, etc.

It is not my intention to discuss at this time the clinical signs of the acute stage. The disease has been so widespread in the last few years that all physicians have observed at least a few cases and are therefore familiar with the symptoms. However, it may be advisable to state that the popular name "sleeping sickness" is not at all appropriate in many cases as some do not show any unusual somnolence and, indeed, may exhibit the very opposite condition of insomnia or even delirium.

Like all other diseases, epidemic encephalitis may terminate in three ways. Complete

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recovery, death, or recovery with a certain degree of physical or mental, or both mental and physical impairment. In a considerable number, there is left as a residue of the inflammatory process in the basal ganglia, degenerative processes which cause a train of symptoms resembling very closely the manifestations of paralysis agitans.

Of the clinical manifestations, those related to the corpora striata, Hunt (J. M. Ser., Oct. 1921, cl xli) believes have aroused the greatest interest. Symptoms referable to the corpus striatum occur very frequently in the acute stage of the disease and are evidently associated with an early localization of the inflammatory process in this region. They may also appear at a later period after all the acute symptoms of the disease have subsided. Very remarkable is the appearance of striatal symptoms, as late sequelae, weeks or even months after apparent recovery suggesting a recrudescence of the infectious process. Striatal symptoms are of two types. There is a pallio-striatal or pallidal type characterized by paralysis agitans and there is a neo-striatal type characterized by choreiform movements. Of the two the paralysis agitans type is the more frequent and usually the more severe. The tremor is much less constant and when present, less conspicuous than in true paralysis of automatic associated movements, the mask like expression of the face, the posture of the hands and arms, and gait and attitude appear early and are identical with those observed in true paralysis agitans.

As stated, the symptoms may appear during the acute stage, or they may be delayed weeks or months. They may soon become stationary, or gradually progress, or may have stationary periods alternating with periods of advancement. It is said sometimes Parkinsonian symptoms appearing during the acute stage disappear and the patient makes a complete recovery. It has not been my good fortune to witness such a result.

True paralysis agitans is produced by progressive lesion of the pallidal system, which is atrophic or degenerative in character, and occur always in persons who have reached middle life. The paralysis agitans of encephalitic origin is merely a symptomatic manifestation due to injury of the pallidal system by inflammatory lesions or toxins. A tendency to progression in the paralysis agitans group of encephalitis is not uncommon and in many cases has been marked.

The symptoms may be general, hemilateral or segmental in distribution; that is, widely distributed, limited to a lateral half of the body or to a hand, perhaps, or to the face

alone. The symptoms then, of course, are muscular rigidity, paralysis of automatic associated movements, mask like expression of the face, characteristic posture of hands and arms and characteristic gait. I have read somewhere that a differential symptom is that in paralysis agitans due to encephalitis the patient can run more naturally than he can walk, while in true paralysis agitans this is not the case. I have verified this in two cases. I had one case with a marked polyuria showing, I think, involvement of the hypophysis. In true paralysis agitans there is no tremor of the tongue, but in that due to inflammation the tremor of the tongue is marked. Parkinsonism due to encephalitis is very apt to produce an increase in the patients, while the opposite is true in typical paralysis agitans. The prognosis is said to be fair, but my patients have not improved. Certainly all the nerve cells that are actually degenerated cannot be reproduced and any improvement must be in those instances in which the changes are inflammatory and oedematous without destruction. The only medication indicated is iodine and this is given empirically. In addition, general hygienic measures should be carried out with suitable exercises and muscle training.

Moren (Case report Kentucky M. J., Sept. 1922, xx600) reports a case that seemed to recover and then had a second attack that was permanent. Wilson (proc. Roz. Loc. Med. 1919-20, xliii, Clin. Sec. 65-66) reports a case that in addition has spontaneous nystagmoid movements.

*Case I. 11560. True Paralysis Agitans.* White woman, age 68. About five years ago arms and legs of patient gradually weakened until at this time she cannot stand alone, cannot walk, and tends to fall forward when she attempts to do so. The weakness began in one arm and gradually extended to the other limbs. One of the very earliest symptoms in addition to the weakness was a tremor of the fingers. The present examination shows normal cranial nerves, except a mask like countenance. Patella reflexes are somewhat exaggerated. The pupils react to light and there is a constant general tremor, including the head. The tremor of the hands is of the typical "pill rolling" type. There is general muscular rigidity, limbs and trunk are flexed and while locomotion is barely possible, it shows the "propulsive" tendency. Patient emaciated. This is a typical case of paralysis agitans beginning after middle life, slowly developing, without pain and emaciation.

*Case II. 17033. Parkinsonian syndrome following Encephalitis.*

A very thin white woman aged 38. She has a mask like face, immobile facial muscles, eyes "staring." Her hands have the typical pill rolling position and some tremor. Tremor is decreased on movement. Tremor of tongue marked. There is a distinct history of encephalitis occurring a few months ago. Before that the patient was entirely well and all the present symptoms are the result of the central inflammation. In this case there was marked tremor of the tongue, a condition not present in true paralysis and the patient is only 38 years of age.

*Case III.* A white man, aged 45.

Three years ago had "influenza" and was unconscious for thirty-eight days. He has never been well since, but his mind has remained clear. He has marked ptialism, marked coarse tremor of hands, arms and legs, muscular rigidity, mask like face and spastic weakness. The drooling of saliva is the unusual feature of this case. While the man is old enough to develop the genuine paralysis agitans, the condition developed quite suddenly immediately following an attack of undoubted encephalitis.

*Case IV.* This young man, aged 20, gave a history of typical encephalitis a few months ago. Beginning a few weeks after apparent recovery he gradually developed spastic weakness, flexed position of all joints, mask like countenance, drooling and a polyuria. He was entirely normal prior to the attack of encephalitis. The unusual feature here is the marked polyuria. Extract of hypophyseal gland substance was given a thorough trial, but the output of urine was not decreased.

## SYPHILIS OF THE ALIMENTARY TRACT\*

D. D. PAULUS, M.D.,  
OKLAHOMA CITY

While syphilis of the alimentary tract is comparatively a rare condition, the more extensive use of the x-ray and the Wassermann test during the past decade has shown us that the condition is more frequent than some writers would lead us to believe. Undoubtedly the recent increased interest and added literature on this subject has given an additional impetus to clinicians to be on the alert for this condition.

The incidence of syphilis as an etiological factor in gastro-intestinal cases has been variously estimated by a number of authors from one-half to two per cent or more.

Some authors report the presence of syphilis in four per cent or more of their cases presenting themselves with gastro-intestinal symptoms as their chief complaint. One must remember, however, that while a given case may show a positive Wassermann and signs of syphilis elsewhere, yet syphilis is not the cause of the gastro-intestinal disorder. When such cases are given the therapeutic test, the results obtained by anti-syphilitic treatment would indicate that the findings of the presence of syphilis was a mere coincidence and not the real causative factor as far as gastro-intestinal symptoms were concerned.

On the other hand the writer firmly believes that there are a certain number of cases diagnosed as inoperable cases of cancer in the presence of a negative Wassermann, who are allowed to go on to a fatal termination, whereas a vigorous course of anti-syphilitic treatment might have proven our diagnosis of cancer in error.

The parts of alimentary tract (not including mouth) most commonly involved in a syphilitic process in order of frequency, are rectum, stomach, esophagus, colon and small intestine.

### ESOPHAGUS

Two conditions have been recognized, ulcerations and gumma. Most authors believe that as a rule in gumma, the process develops in the structures outside of the esophagus and only secondarily involves the esophagus proper. As the gumma breaks down very extensive erosions may occur. This, however, is usually not recognized until the gumma extends into the lumen or contractions have begun causing partial obstruction.

There are many other authors, on the other hand, who state that the process may exist as a round cell infiltration of the mucosa and submucosa with shallow ulcers in mucosa and gummata in mucosa and muscularis. When we compare the anatomic structure of the esophagus with the rest of the alimentary canal I see no reason to disagree with the last named view. If this is correct, then it is probable that in some instances of apparent stenosis that we have treated successfully by anti-syphilitic remedies, were cases of irritative stenosis due to syphilitic ulcer or gamma in the walls of the esophagus.

About two years ago a case occurred in our Clinic that appeared on X-Ray to be very definitely a case of carcinoma of lower end of esophagus with considerable dilation of esophagus above point of obstruction. The Wassermann, however, was three plus positive.

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With these findings and without any other treatment than anti-syphilitic remedies, she made almost a complete recovery in one month's time. She was perfectly well when last heard from one and one-half years later.

Another case was diagnosed as cancer of lower end of esophagus with complete obstruction. Wassermann negative. Gastrostomy performed to feed patient. Radium treatment advised but not accepted. In spite of negative Wassermann test, patient was urged to take anti-syphilitic treatment as his one chance. Six months later, reports he has gained thirty pounds and is able to eat ordinary foods, by mouth.

#### STOMACH

Origin in stomach primarily in form of round cell infiltration of submucosa, very often in association with characteristic periarteritis and endarteritis of gastric vessels. At a later stage we note a tendency to gummatous development and gummatous nodules appear as multiple discrete deposits or as confluent masses. The ultimate result is a progressive degeneration of gummatous growth resulting in either softening or ulceration, or eventual cicatrization or a dense hyperplasia of connective tissue.

The clinical aspect depends largely upon the character and location of the lesion present. Certain types are recognized.

1. Syphilitic gastritis.
2. Syphilitic gastritis with ulceration.
3. Hyperplastic gummatous tumefaction with or without pyloric stenosis.
4. Syphilitic cirrhosis.

Besides the above we may have extensive lesions with hour-glass stomach and also cases of peri-gastritis with peri-gastric adhesions have been reported. The region most commonly involved, however, is said to be the pylorus.

No characteristic symptoms and no certain clinical findings are noted which might differentiate the condition from simple ulcer or cancer. The diagnosis must be made by a process of exclusion. The X-Ray is of considerable assistance.

The symptoms most frequently encountered are pain, emaciation, tenderness, less frequently hematemesis and melena. In some instances vomiting immediately after eating is a principal symptom. Flatulency and low acidity are usually present. As a rule, the patient does not progress with same degree of cachexia or general malnutrition as does a cancer case, nor is there often the disproportional loss of weight unless stenosis occurs.

It is said that in the majority of cases the pain often has no direct relation to meals or

intake of food but has a tendency to nocturnal exacerbations.

According to the X-Ray findings we may recognize certain conditions or similarities.

1. The ulcer type.
2. Tumor, with filling defect.
3. Hour-glass contraction.
4. Hyper-plastic diffuse or leather bottle type.

It is our firm belief that in every case of chronic gastritis or supposed case of cancer of stomach, one should have a Wassermann test made and examine very carefully for evidence of syphilis elsewhere.

A man 53 years of age came to the Clinic because of supposed cancer of stomach, of five months' standing. X-Ray showed diffuse cirrhotic type. Weight loss 75 pounds, unable to retain food. Wassermann four plus positive. Under anti-syphilitic treatment he made a complete clinical recovery in four months, and two and one-half years later is in apparently perfect health.

In secondary stage of syphilis we may have a chronic gastritis which is syphilitic in nature. In the majority of these cases a deficiency in acid is present, in contrast to ordinary ulcer. In Tabes or Tertiary syphilitic stages we may find periodical recurring pains and vomiting with a sense of oppression in gastric region due to root irritation of sensory nerves and called Tabetic Crises. However, quite often, in late syphilitic conditions, we may have various symptoms referred to stomach even when no gastric crisis is present. The results of gastric analysis in considerable number of these cases shows that achylia is comparatively a frequent occurrence and that the probable cause of this is chronic gastritis.

#### INTESTINE AND COLON

Syphilis of intestines is rarely recognized except as it is met with in the post mortem room or on the operating table. Since the more extensive use of serological methods, the bed-side recognition of this condition has been materially facilitated. It occurs both as a congenital and a primary condition. When congenital, the lesions are found most often in the lower part of the ileum where syphilitic granulation tissue develops, ultimately breaking down and forming ulcerations at right angles to course of intestine and in healing gives rise to annular constriction.

In primary conditions the lesions occur with about equal frequency in the small intestine and the colon proper, having a predilection for the regions near the ileo cecal valve, the jejunum, the cecum and lower end of colon.

It is seen in early involvement or during

secondary stage with definite intestinal manifestation, but most often represents a tertiary lesion. During the exanthematous manifestation of secondary stage we may have intestinal symptoms representing a catarrhal enteritis. The symptoms are not any different than the ordinary catarrhal enteritis except that it does not respond to treatment of the ordinary enteritis.

In late involvement symptoms depend largely on location and type of lesion and are usually confused with other abdominal lesions such as intestinal obstruction, tuberculosis, carcinoma and intestinal perforation and peritonitis. Because there are no characteristic symptoms, few cases are recognized as being due to syphilis or syphilitic in nature. While the gumma is in non-ulcerative stage we may have definite symptoms of a beginning of stenosis of intestine, or by its size simulate a tumor-mass of cancer. When the gumma begins to ulcerate then we have the symptoms of an ordinary chronic ulcerative enteritis namely: Pain, rebellious diarrhoea, blood, pus, often with complications such as stenosis or ileus. When there are numerous ulcers in cecum the condition may simulate tuberculosis.

A case came to the Clinic with symptoms similar to that of an old chronic appendix except that occasionally complained of gripping pain similar to that of tuberculous involvement of cecum. Wassermann negative. On operation the surgeon found the cecal wall very much thickened with thin areas that appeared to be ulcerations. The case was thought to be tuberculosis of cecum. Further investigation, however, showed the presence of a beginning stricture of rectum. A second Wassermann came back three plus positive. Under anti-syphilitic treatment the man has improved considerably.

The diarrhoea in late tertiary syphilis of the intestine or colon is usually very rebellious and often depletes the patient rather rapidly. It is, of course, only controlled by anti-syphilitic treatment. In some cases it may be associated with arterio-sclerosis or even amyloid degeneration. When amyloid degeneration appears the diarrhoea continues regardless of anti-syphilitic or other remedies and usually means a fatal termination.

In the case of healing type of ulcerating gumma we have symptoms of beginning stenosis with increasing constipation, often alternating diarrhoea or loose bowel movements with constipation, depending whether ulceration exists above the point of constriction.

In paralytic lesions like *Tabes*, we often

have colonic crises and intractable diarrhoea. The symptoms are not due to any lesion in gastro-intestinal tract but rather to a disturbance of nerve mechanism.

#### RECTUM

Syphilis of rectum probably occurs more often than all of the other parts of the alimentary canal combined and is not at all an infrequent lesion. Some authors believe that it occurs more frequently in women, and that possibly the reason for this is an infection derived from the secretions of a discharging ulcer of the genitalia.

During the secondary stage we may have mucous patches and ulcers in the rectum. The symptoms of this condition are diarrhoea or loose bowel movements, with blood, mucus or pus and often tenesmus. Often this condition is not properly recognized and is attributed by the attending physician to mercuric remedies.

The type of lesion encountered in the tertiary syphilitic changes are:

1. Ulcer.
2. Gummata.
3. Fibrous hyperplasia.

In the early stages of gummatus formation one can feel the gummata as hard nodules in the rectal wall simulating enlarged lymph gland. Later when softening and liquefaction occurs we have a rather diffuse proctitis associated with ulceration, cellular infiltration and with muco-purulent discharge. The cases of diffuse fibrous infiltration of rectal coats without definite gumma formation are rarely recognized during infiltrative stage. In this condition the rectal wall feels stiff and hard to the examining finger.

The lesion most frequently found is an ulceration with cicatrization and finally stenosis. It usually occurs low down in the rectum within reach of the examining finger and is readily recognized as a definite stricture. In this condition the rectum narrows like a funnel, upward, and we can feel the sharp edge of the ring-like cicatrix with the point of the finger. This funnel shaped stenosis of the rectum is so characteristic of syphilis of rectum that in practically all cases we can make the diagnosis with certainty from this finding alone.

Above the stenosis we usually find the rectum and descending colon dilated. Extensive irregular ulceration with undermined edges are found in mucous membrane. These ulcerations are due partly to their specific nature and partly diphtheritic resulting from

pressure of fecal accumulation masses.

The early symptoms of syphilis of rectum often are attacks of looseness of bowels with blood or pus. Sometimes we have rather free hemorrhage which may be thought to be coming from external hemorrhoids. There is usually a decided catarrh of rectum so that the thin stools contain a large admixture of mucus and pus. In spite of frequent stool there is still a feeling of fullness in rectum. Sooner or later, however, the patient complains of increasing constipation and finally ribbon-like stools are obtained. Patient's condition is quite distressing and is constantly getting worse due to pain from tenesmus, etc. He soon loses strength, looks pale, becomes emaciated and often has fever towards evening.

The ulceration which is often present above the point of stricture may allow infection to pass through the wall with resulting peri-rectal abscesses and fistulae. The fistulae may lead to the external skin surface or to the vagina. Often-times the complicating peri-rectal abscess and the fistulae are the first symptoms which bring the patient to the physician.

About two years ago a patient presented herself for a fistula extending into the vagina. Some weeks previous to this she had developed a peri-rectal abscess which ruptured in vagina. She had not been aware of her rectal condition except for considerable tendency to constipation with uneasy feeling in rectum, during past year.

Physical examination revealed a definite stricture three inches above the anal sphincter. Wassermann three plus positive.

The prognosis in stricture of rectum is not very good as a rule. Vigorous anti-syphilitic treatment is essential, especially when the case is seen fairly early. Ulceration, when present, should be cauterized, repeatedly if necessary. Rectal and colonic irrigation should be used.

After marked stricture has developed the use of anti-syphilitic remedies has very little effect on the scar tissue present. We must now resort to forcible dilation of stricture, or complete excision, if practicable. In dilating stricture extensive laceration must be avoided as the resulting addition scar tissue will simply aggravate the condition. Moderate pressure should be used with rectal dilators, gradual dilation by one or two treatments a week over a long period of time, gives the best results. When this fails, complete excision of stricture bearing area has to be considered and when this is practicable we may have to resort to colostomy.

*Discussion:* J. M. Postelle, M.D., Oklahoma City.

Dr. Paulus' paper is timely, well written and brings out many very valuable points that should be studied well by every practitioner of medicine. Point number one in the doctor's paper is calling attention to the importance of being on the alert for syphilis with patients complaining with gastro-intestinal symptoms. Point number two is the incidence of syphilis as an etiological factor in gastro-intestinal disease. The doctor states that from two to four per cent of cases presenting themselves for treatment for gastro-intestinal disturbances are syphilitic or that syphilis is demonstrated in that percentage. My own experience is that the percentage is not too high. I have recently checked up over 300 cases that have been referred to me for diagnosis and treatment for some gastro-intestinal trouble and in this series syphilis was present or was demonstrated in 5.6 per cent of the cases, which is considerably higher than the doctor mentions in his paper.

In this connection I wish to call attention to the difficulty in differentiating between symptoms and conditions, syphilitic and non-syphilitic effecting the stomach and small intestines. A diagnosis of syphilis of the esophagus and rectum is quite easy, also it is not so difficult in the colon, but to demonstrate syphilis of the stomach and small intestines is exceedingly difficult. The symptoms may simulate ulcer or cancer, but the rule is the symptoms are indefinite. The x-ray and blood Wassermann, or Wassermann alone when positive is conclusive evidence. In many cases the Wassermann and x-ray are both negative. In the latter cases the tertiary stage have been reached and the symptoms are reflex thru the vegetative nervous system and can be demonstrated only thru a spinal fluid Wassermann or the therapeutic test. A case illustrative of this difficulty has been reported by me before but would not be amiss to mention it here. A lady 55 years old consulted me for severe pain in her stomach which had been more or less constant for several months and which was not influenced by eating or drinking. The pain was very severe and required morphine to relieve it. The physical examination was negative, blood Wassermann, x-ray, and all laboratory examinations were negative. She was put in the sanitarium under observation for several days during which she suffered much pain except when under the influence of morphine, and all this time begged for an operation. Finally an exploratory incision was made and nothing pathologically

was found in the abdomen. A spinal fluid Wassermann was then made and was four plus. A thorough course of anti-syphilitic treatment was given her and she is apparently well at this time. This was a case of a crises as the doctor mentions in his paper.

Point number three refers to the gastric analysis in syphilitic cases and that the rule in digestion is impaired by reason of a reduction of the digestive fluids, this is a fact and is one point in the diagnosis. In my own cases 62.5 per cent had a low digestion, but not an achylia as the doctor mentions is sometimes present. Thirty-one and four tenths per cent had a normal digestion as demonstrated through the laboratory and 6.1 per cent had a high acidity.

Dr. Paulus has covered his points well in this paper and has given as evidence several cases in his own experience illustrative of the facts he has brought out which makes the paper so much more valuable than had it been culled from the current medical literature. Papers like this from one's own experience, adds to the research literature of the day, and will live long after the writer has passed to his reward.

#### AN UNUSUAL FOOT CONDITION\*

C. D. BLACHLY, M.D.  
DRUMRIGHT

K. H., aged 17, consulted me in May 1920, on account of a painful condition involving both feet. He is the eldest of five children, the other four being in good health. The father, now 45 years of age, and the mother, 40, are both in good health.

*Personal History:* The patient's condition has always been below normal. As a child he suffered from headaches and disturbed digestion. He grew up normally in height but his bones were always small. The dentition, both temporary and permanent, was and is normal. During the first twelve years of life he sustained five fractures of his right forearm. He has had the usual disorders of childhood. At six years of age he had typhoid fever and at twelve a rather severe attack of influenza from which he made a good recovery. Mentally he has always been normal.

In 1919 he began working in a soda fountain where he continued for several months. During this time his feet were constantly wet. About Christmas, 1919, he noticed a tendency to walk on the balls of his feet. His feet

tired easily. There was no pain. On January 7, 1920, he noticed his feet would hurt when he got up to go to work after resting in the sitting posture. Because of the pain and discomfort in walking and standing he gave up his work at the fountain. Up until this time nothing abnormal was noticed on either foot. A short time after this the feet began to swell over the metatarsophalangeal joint. The pain was worse on arising. The swollen areas took on a dark bluish color and became so tender he could walk only with difficulty.

*Physical Findings:* In May, 1920, the patient presented the appearance of a boy of average size at his age, then 14. He was fairly well nourished. The skin was soft and rosy and the hair soft. Nothing abnormal was noticed about the eyes, ears, nose or throat. There were no enlarged glands. The chest was negative as to heart and lungs; the abdomen, negative; upper extremities, negative. The lower jaw was slightly prognathous. The skeletal system, small. The patient was mentally alert. The oral temperature has been normal at all times. The blood examination as regards absolute and differential counts and Wassermann was negative. The urinary findings were negative. Both feet showed marked swelling over the fifth metatarsophalangeal joints. There was redness, increased heat locally and tenderness. The feet presented the appearance of misplaced bunions. An X-ray made at this time showed all the bones clear cut in outline and without evidence of atrophy or destruction. At that time the bones were erroneously considered normal and symmetrically enlarged. Failing to make a satisfactory diagnosis at this time I referred the case to Dr. Fishman, who, after a careful study of the case diagnosed it as Weir-Mitchell's Disease—erythromelalgia. The case passed from under my care at that time. One and one-half years after the onset of the disease I again made an X-ray of the feet. This time I found the fifth metatarsal bones about four times the size of the normal bones and with marked changes in the metatarsophalangeal joints, the latter showing both atrophy and destruction. Very slight changes were shown in the 3rd and 4th metatarsal bones and their respective joints but the distal ends of the shafts of the 2nd metatarsal bones showed considerable hypertrophy and the metatarsophalangeal joints some atrophy and destruction. No involucrem was seen. An X-ray of the cranium showed no changes in the sella turcica and another of the hands no bony changes there.

This case is interesting to me from the fact that it shows a distinct, symmetrical, bilateral, selective involvement of non-adjacent

\*Read before Section on Genito-Urinary, Skin Diseases and Radiology, Oklahoma State Medical Association, Annual Meeting, Tulsa, May 15, 16, 17, 1923.

bones and their respective joints. The question uppermost in my mind is whether or not we are justified in still considering this a case of Weir-Mitchell's Disease or do the symptoms and findings brought about in three years time warrant a change in the diagnosis. Realizing the fact that the above mentioned disease is unusual and not well understood I considered a further study of the case justifiable. In attempting to make a differential diagnosis all the diseases showing actual changes in the bony structures might be considered but as this would prolong the paper to a tiresome degree we will mention only a part of them, giving at the same time the principal reason why each of these disorders might be ruled out. To begin with, *ostitis deformans* is a disease of adult life and involves more particularly the long bones and the skull. *Secondary hypertrophic osteoarthropathy* is accompanied by clubbing of the fingers and toes. *Ostitis fibrosa cystica* usually involves the long bones and is accompanied by cyst formation. The multiple fractures of the forearm suggest this possibility. *Osteogenesis imperfecta* shows no hypertrophy. The bones are delicate and easily broken. *Osteomalacia* is characterized by the cessation in the growth of the long bones of the body. This disease is also congenital. *Multiple cartilaginous exostosis* is a congenital disease showing irregular bony and cartilaginous exostoses. *Giantism* is a painless affection and the patient grows to enormous size. *Acromegaly* is also painless. The length of the jaw suggested this disorder. *Malignant disease* is usually unilateral and destructive. *Charcot's joint* may be hypertrophic but usually is not symmetrically bilateral and is also characterized by lack of pain. Simple *ostitis* in its various forms must be considered. However, after this period of years one would expect to find an *involucrum* and *sequestrum*. *Tubercular ostitis* involves the epiphyses with destruction of the bony tissues but usually is accompanied by the formation of cold abscesses. *Syphilis* involves the diaphysis and is accompanied by hypertrophy.

In summing up this case we have here a chronic bone condition characterized by the usual signs of inflammation, i. e., redness, swelling, pain, and increased local temperature. There is hypertrophy of the shafts of certain bones and atrophy and destruction of the epiphyses and respective joints. No abscess, *involucrum* nor *sequestrum* is found. The above changes have taken place progressively first in the shafts of the fifth metatarsal bones, secondly in the fifth metatarsophalangeal joints and thence to the shafts

and the respective joints of the second metatarsal bones. A careful study of the films shows a tendency to atrophy of the epiphyses of the fourth metatarsal bones. It is interesting to note also that the last X-ray shows a drawing under of the terminal phalanges of the toes.

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*Discussion:* C. J. Fishman, M.D., Oklahoma City.

In the discussion of this case as presented by Dr. Blachly, at the first thought it seems somewhat embarrassing for me to review a case which obviously was a wrong diagnosis at the time I first saw this patient. However, when we consider that the important symptoms, as presented by the patient at that time, were subjective pain in his extremities with redness and discoloration of the legs, especially upon standing or after holding them in a dependent position without any further findings and especially in the absence of neurological signs, the diagnosis of the *erythromelalgia* was certainly not far-fetched at that time. As the symptoms developed there is no question about the bony deformity that is present in this case and one must consider the diagnosis, at present, from the following points of view.

*First:* In the early years, as a neurological or a neuro-vascular condition, under which we may include *erythromelalgia*, as was considered at that time, or *Buerger's Disease*, of which there has been considerable talk in recent years, and described by Buerger as a disease of the vaso-constrictors. Dr. Buerger ingeniously invented an operation whereby the sheaths of the arteries were separated from the vessels and these included the nerve supply, thereby releasing the vaso-constrictor action. Some of these operations have resulted in vast benefit or even in cure. In this group also, may be considered *Raynaud's Disease* or symmetrical gangrene which apparently is of a similar nature to the above and finally we have the condition known as "*Intermittent Claudication*," a disease which effects largely the Slavic people and may go on to develop degenerative changes in the peripheral blood vessels. Some of the above conditions were considered to be a stage in chronic *ergotism*, but at no time has this been proved.

In the *Second Group*, we have the neuroarthritic conditions in which the atrophic and hypertrophic arthritis or periostitis, may be considered, while *osteogenesis-imperfecta* is a name for a disturbed growth upon what is probably a neurotic basis. Finally we have

the pure arthritic group of which arthritis deformans and the hypertrophic and atrophic arthritis conditions are considered. They are, as far as we are able to determine, infectious in origin and one or more may occur in the same individual at various stages.

It is quite possible that some of these conditions are associated with disturbed metabolism upon a basis of some gland dyscrasia. In this particular patient, because of the prognathism which is so frequently found as an early sign of acromegaly, it is quite possible that the pituitary gland plays some role in the development of this condition.

As far as the definite diagnosis is concerned one would hardly be justified in a name for this condition, although when considered from the point of view of possibilities, the neuro-arthritic disturbances based upon a gland dyscrasia is a most likely opinion.

### *Abstracts, Observations from Current Medical Literature*

#### ATHLETICS

"Men with flabby muscles and large abdomens are prone to do flabby thinking and, as a consequence, act with corresponding inefficiency in all matters in which they participate. Lessons learned on the athletic field and in the gymnasium will be carried into the daily work of every man. Men physically fit do not violate the fundamental laws of health and are free from temptations which beset men who make no effort to keep in good physical condition." These comments are made by Mr. E. C. Delaport, superintendent of the Chicago Public Schools Athletic League, in his account in the December issue of *Hygeia* of the recent athletic field meet of the Chicago police department, which was witnessed by more than a hundred thousand people.

#### KEEPING THE BABY WELL

To keep a baby healthy it is necessary to start before the baby comes. Motherhood should be a source of happiness and never a cause for fear. The prospective mother must lead a healthy life with plenty of fresh air, moderate exercise, ample sleep, simple, nutritious and easily digested food with fruits in abundance and at least five or six glasses of water daily. She is not sick, but should place herself under the care of a doctor to keep well. Much depends on her health and contentment at this period if the baby is to be healthy and bring the happiness that is the proper accompaniment of maternity. The new-born baby should be oiled and not washed and should be nursed for the first time about five or six hours after birth. It is essential for the health of the baby and for the real contentment and health of the mother that the baby be breast fed. Nursing should be done at regular hours, allowing nothing to interfere that can possibly be avoided. Regularity establishes habits that make the training of the child easier in other matters. Nursing should be

continued, except in the case of the mother's illness without other food until the baby is eight or nine months old. Weaning should be gradual. These and many other important hints for rearing healthy children are given by Drs. L. Emmett Holt and Henry L. K. Shaw in the December issue of *Hygeia*.

#### THE SMALLEST DISEASE GERMS

During the latter part of the nineteenth century, the term filtrable virus was introduced in medical literature to describe a group of disease-producing agents, so small that they could pass through an earthenware filter, the pores of which were smaller than the smallest bacteria then known. Since these organisms were so minute that they could not be seen with a high powered microscope, it became customary to speak of them also as ultra-microscope organisms. Later it was found that if these organisms were properly stained, their presence could be determined under the microscope, and the latter term was discarded. It is an interesting fact, as pointed out by Dr. Charles E. Simon, that the first representative of this class of disease-producing agents was an organism causing the mosaic disease of the tobacco plant. This was described in 1892. Two scientists were able to show in 1898, that the cause of hoof and mouth disease was an organism of this character, and it was suggested at that time that other conditions, such as scarlet fever and measles, might also be due to filtrable viruses. Finally, in 1913, a list of forty-one diseases, affecting man and various animals, was assembled, in which satisfactory evidence seemed to have been collected that the causative organism was of this character. Since that time a number of other conditions have also been definitely connected up with the activity of such small bacteria. The most recent investigations concern the relationship of a filtrable virus to epidemic encephalitis, epidemic influenza, measles and trachoma. Numerous investigators have shown, by injection of material taken from patients with epidemic encephalitis—"American sleeping sickness"; an inflammation of the brain—that a disease resembling it could be produced in animals. When the tissues of the animals were examined, they were found subject to changes like those that occurred in human beings who had died of the disease. Workers at the Rockefeller Institute for Infectious Diseases have found an organism in washings from the noses of persons with influenza which they believe is the causative organism in influenza, and numerous investigators have found organisms of this character in the blood and in the secretions of persons with measles.—*Hygeia*.

#### FOOLING THE FAT

It would be unfair to say that all fat persons eat too much and take too little exercise, but it is certainly true that most of them do—as do also many who are not fat. And it is the overfed, underexercised individual who thinks that somewhere there must be a panacea that without effort or self-denial, will transform what the corsetieres euphemistically call "stylish stouts" into "boyish-form" "lissomeness." Thus Dr. A. J. Cramp, in the December issue of *Hygeia*, introduces a de-

scription of a particularly glaring example of the fake remedies that can reduce nothing but the pocket book of him or her who "falls for" the bunk contained in the advertisements. This particularly crude example is known as Slendaform and is found on analysis to consist of what is practically turpentine and vinegar mixed to sell at \$5 a jar. This mixture is to be rubbed into the skin and not taken by the mouth.

### THE TREATMENT OF URETHRAL STRICTURE BY EXCISION

The history of urethral stricture as it is recorded in medical literature is reviewed by Granville MacGowan, Los Angeles (Journal A. M. A., Dec. 1, 1923), and the technic of its repair is discussed in detail. In the author's operation, the intention is to restore the tube by approximating its cut ends in their entire circumference, and this, he says, is best achieved not by the laying of a circular stitch, such as was done by Mayo Robson with success after the excision of an annular stricture where the loss of structure was not more than 1-4 inch, and as was the practice of König, but by slitting the urethra and spongy body both anteriorly and posteriorly into three strips, or ribbands, one posterior and two lateral, using great care not to mangle the tissues and to have clean incisions. MacGowan reports no failures from the use of this method.

### PROCEEDINGS OF THE OKLAHOMA CITY CLINIC ROUND TABLE

WESLEY HOSPITAL,  
OKLAHOMA CITY

DR. A. L. BLESCH.

I wish to report tonight two major cases of surgery merely to illustrate the very satisfactory development of local anesthesia within the recent years. Of course, there is no longer anything new in this, but notwithstanding its use almost to the exclusion of general anesthesia in many Clinics, its many advantages do not seem to have dawned on the surgical mind at large. My remarks are not to be an argument for its use but merely a description of its use in two concrete major cases.

*Case I.* Man, well past midlife, with a stomach history of only several weeks' duration.

Negative family and previous history. Clinically at this time he is suffering from starvation from pyloric stenosis, accounting for which is found a palpable, movable mass in region of pylorus. Hematemesis. Massive vomitus.

Diagnosis: (Dr. Postelle by whom patient was referred) Carcinoma pylorici with stenosis and inanition.

Operation: Resection stomach (two-thirds) Gastrojejunostomy posterior.

Operative Diagnosis: Same as clinical, confirmed by microscopic examination (Bailey).

Anesthetic: Local, novocain and adrenalin one percent for skin, one-fourth of one percent for depths.

Method: Infiltration and block.

Operative Findings: A stenosing, hard, moveable mass in pyloric region.

*Remarks:* With a preliminary dose of one-fourth grain of morphine, this patient dozed on the operating table while the operation was being done. He would complain only when traction was made on a viscus. Before lifting the stomach to place the clamps in position, as soon as the abdomen was opened and while the viscera lay in repose in a state of negative pressure, the gastro-hepatic mesentery, or ligament as it is often called, was blocked transversely with one-fourth of one percent novocain. This done there was no subsequent complaint with any manipulation necessary to accomplish this rather formidable operative procedure. I say *necessary* manipulation for the reason that *unnecessary* ones are prone to creep into the technique of the surgeon who operates only under a general anesthetic. The repetition of the word *gentle* may get on the nerves of my readers as I'm sure it does on those of my assistants, but the wider my experience grows the surer I am that not only shock, visceral paresis, and post-operative suffering are generally due to roughness in handling tissues, but even life itself is at times the forfeit.

The patient came off the table without even pulse acceleration.

*Case II.* Female, well past midlife, also a patient of Dr. Postelle, who brought her to the hospital first as an emergency case with a perforated duodenal ulcer. This emergency was met in the night by one of the Clinic Staff, by suturing the perforation and draining the abdomen.

During the course of her convalescence she developed pyloric stenosis practically complete. Starvation was not only in the offing but right at hand for the reason that the previous work upon the stomach necessitated strict dieting as well as battered down her resistance. She was certainly an operative risk in which every factor of safety must be considered and be utilized.

Diagnosis confirmed by X-ray, Stenosis Pyloric, ulcer duodenalis chronici.

Operation: Gastro-jejunostomy, post.

Anesthetic: Morphine—pre-operative gr. one-fourth. Novocain and adrenalin one per

cent skin, one-fourth of one percent in depths. Technique as in preceding case. The patient carried on a very animated conversation on general subjects while the work was being done. No complaint of pain during the entire procedure, although it became necessary to almost disembowel her in order to locate and secure the proper jejunal segment for the anastomosis. Gentleness was here rewarded as it always surgically will be. The guts never *begin* a fight with the surgeon.

This operation was done at 10:00 A. M. and on making rounds at 4:00 P. M. the patient was found reading the evening paper and begging for food.

*Remarks:* I have but one object in bringing these cases to your attention. I wish to show that any operation can now be painlessly and shocklessly done under local anesthesia. I am not arguing that local anesthesia is always the anesthetic of choice. I am claiming no credit for this. The same thing is being and has been done in several clinics in this country and abroad for several years. We have with us the ether surgeons, the gas surgeons, and the local surgeons. Against any and all of these I am inveighing. There are many times when ether should not be used, if ever. There are fewer times where gas is contra indicated. There are cases which should not be subjected to the ordeal of consciousness while undergoing operation. The anesthetic should be fitted to the patient, not the patient to the anesthetic.

### RENAL GLYCOSURIA

DR. WM. H. BAILEY,  
OKLAHOMA CITY

I wish to report a second case of renal glycosuria that has gone thru the laboratory in the last year.

Mr. L. P. M. of this state, referred to the Clinic for Iletin treatment because sugar was found in his urine.

**Family and Previous Medical History:** Negative as far as this condition is concerned.

**Personal History:** Generally well and strong as a young man. Denies venereal infection. Bowels regular. Kidneys act normally. Appetite and digestion fair.

**Present Illness:** Present condition began about one month ago with general malaise, dull headaches and tired easily. He falls into a very heavy sleep on retiring and feels exhausted in the A. M. He thought he had "a touch of malaria" and went to his doctor who on routine examination found sugar in the urine, and put him on a restricted diet. Urine was sugar free in four days. Patient has lost fourteen pounds weight in last month.

Has been on full diet for last two days.

**Physical Examination:** Practically normal in every respect.

Urine shows 1.5 per cent sugar, no acetone or di-acetic acid, a small amount of albumin and an occasional hyaline cast. 31 ounces in 24 hours.

**Blood Chemistry:** Blood sugar 62 mgm. per 100 CC, Carbon dioxide combining power of blood plasma 86 vol. per cent. Glucose tolerance test giving 100 gms. glucose by mouth, 63.5 mgm. before glucose was taken, 224 mgm. 45 minutes after taking glucose, 174 mgm. 1 hr. and 45 min., 99 mgm. 2 hr. and 45 min.

Until this case had been checked carefully several times by blood chemistry and on different diets we were not willing to call it a case of Renal Glycosuria because he had had several symptoms that clinically indicated a true diabetes, such as loss of weight and weakness and a strong tendency to fall into a profound sleep.

This of course was not a case for Iletin treatment and was one in which serious results might have occurred if it had been given without first making the blood sugar tests, as his blood sugar was already at the low normal.

### SCREW WORMS IN NOSE

J. C. MACDONALD, M.D.,  
OKLAHOMA CITY

A girl eight years old was brought to the hospital because of screw worms in her nose.

Patient has had a nasal discharge with very foul odor for past two years. A few days before her entrance to hospital she was not feeling well and it is thought while she was asleep in school a fly deposited its eggs in the child's nose, attracted there by the fetid discharge.

Examination showed the nose to be red and swollen and completely filled with the larvae of the fly. There was a very foul smelling discharge from the nose and mouth. Teeth were irregular, notched and enamel lacking on certain teeth. Small perforation in central portion of hard palate. Tonsils removed. Otherwise examination negative.

Under ether anesthesia about seventy-five maggots or larvae were removed with suction and forceps. After their removal it was discovered that the septum was in a large part destroyed and the vomer was completely denuded of periosteum and was freely movable. The entire vomer, which was necrotic was removed. This accounted for the perforation of the hard palate.

The condition of her nose and teeth made one suspect hereditary hues. A Wassermann

test proved to be four plus positive.

The afternoon following the removal of the maggots the parents insisted on taking the child home. Two days later she was returned because of severe pain in the nose and upon examination more larvae were discovered above the middle turbinates on either side. About thirty-five of them were picked out with forceps.

Several weeks have now elapsed during which time she has had syphilitic treatment and the fetid discharge from the nose has almost entirely cleared up.

An interesting phase of this case is that while the child has a four plus Wassermann, her father, mother and brothers all have negative Wassermans.

Maggots are quite often found in the nose and ear where there is a fetid discharge to attract the fly.

### HYSTERIC BLINDNESS

J. C. MACDONALD, M.D.,  
OKLAHOMA CITY

The patient, a young woman age 24 years, was seen by me in her home because of sudden blindness.

Six weeks before she had had some irritation of her eyes following an overland trip in an automobile. Thinking her vision also affected, she went to an optician who could not make an improvement on the glasses she was wearing and advised her that her eyes were in a bad condition and that she should see an oculist. She consulted an oculist in another city, who told her that she would probably be totally blind in about six weeks, the oculist thinking that her eye condition was probably due to syphilis because of an exposure thru her husband.

Family History: Negative.

Personal History: Had childhood diseases, influenza in 1918. Had been married six years previous and husband is now in asylum because of general paresis. She had had a pelvic operation two years previously. She was not of a nervous temperament.

Present Illness: Her vision had been gradually getting poorer until a vomiting attack, probably produced by iodides she had been taking, caused complete blindness.

Upon examination of eyes when first seen by me, the right eye pupil reacted to light. Vision was nil. Fundus normal. Left eye; pupil dilated due to atropine instilled by oculist who had first seen her. Vision nil. Fundus entirely normal.

The following day she could distinguish an object moved before either eye.

A spinal puncture was made by Dr. Mraz and while the fluid seemed to be under slight pressure the Wassermann, gold chloride, globulin and cell count of it were entirely negative. Blood Wassermann also was negative.

Due to the fact that she had a severe headache for several days following spinal puncture, nothing more was done, but her vision continued to improve until in two weeks she could read. The only medication she had was potassium iodide for about three days before the blind attack.

This appears to me to be a case of hysterical blindness, because of the absence of any ocular pathology, the negative blood and spinal fluid tests and that there were events, namely the examination by the optician who told her her eyes were bad, the oculist who told her she would probably go blind and the fact that she knew she might have syphilis which could have caused it.

Hysterical blindness usually occurs in females. It may be unilateral or bilateral and may last for a very short time to weeks, months or years.

### A BOUQUET

Dr. C. A. Thompson,  
Muskogee, Oklahoma.  
Dear Doctor:

About two years ago I received a very courteous letter from you, every word showing your sympathy in the case which was pending against me at that time; Byford vs. Weedn. I did not call on the Association for assistance in the case as I carried an adequate protection. I want to apologize at this time for not answering your letter. I assure you that I appreciated it and the advice given very much.

I am sure you will be glad to know that the case has been dismissed. The prosecution delayed this trial from time to time, and when it came to a focus the case was dismissed. I would have fought the case to a bitter end before I would have admitted negligence or incompetency, not merely for my own protection but for the precedence it might have established towards the medical profession. The defence was handled by the Medical Protective of Ft. Wayne and, useless for me to say for I am sure you are already aware of the fact, they handle these cases very satisfactorily.

Thanking you again for your kind and courteous letter, and assuring you that I shall always stand ready to take up arms for the protection and defense of a brother or member of the medical profession, I am

Yours fraternally,

A. J. Weedn, M. D.

# THE JOURNAL

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### EDITORIAL

#### OUR NATIONAL DIPLOMA FRAUDS

Since October our daily press has been carrying repeated items indicating the discovery of an ever widening and extensive conspiracy by which fraudulent medical, and possibly dental, diplomas have been obtained by the most ignorant and unfitted persons imaginable. The first publicity came through the efforts of a reporter of the St. Louis Star, who, after receiving a hint of the situation, set himself to work, under disguise, to run the matter to the end. This he did and in a splendid manner. His work indicates that Missouri, and Connecticut are the chief of-

fenders. The diploma seekers first were sold fraudulent literary credits permitting entry into medical schools, after which they were fitted out with diplomas from the medical school. These in turn were presented to the Connecticut Eclectic Board who issued licenses thereon. Recently eighteen such licenses were revoked by the Connecticut Board and many photographs of the "Doctors" in question were broadcasted to other boards throughout the country in order that similar action might be taken in case they had registered in other states. The State of Arkansas shows up in connection with the matter in unenviable light.

One of the prime movers in the fraud, now under arrest, states it to be his opinion that there are thirty thousand practitioners of medicine in the United States who have received their credentials illegally. One writer suggests that making due allowance for personal feelings in the matter and placing the number at half the amount, we have many thousand too many. It seems no scheme was left unused in the effort to secure these certificates upon which registration could be made. Recently a widow of a deceased physician was bluntly written asking if her late husband's diploma could be purchased, the letter apparently written by one not a physician and with no qualifications to be one. Throughout the country it is being slowly brought to light that physicians posing as graduates of certain schools are utterly unknown to the records of such schools, unknown even to the members who were attending that particular school at the time attendance was claimed by the physician in question.

No doubt it will be found that Oklahoma is harboring some of these illegal registrants, but it must be remembered that many difficulties confront the board in its attempt to unearth them and later to revoke licenses. It stands everyone in hand to give to our State Board of Medical Examiners every bit of evidence which may be obtainable in order that proper action for the protection of Oklahoma's citizenship from the ignorant and unfitted be taken.

#### THE ARDMORE ANNUAL MEETING

We desire at this time to call attention to the next Annual Meeting which is to be held in Ardmore in May. For the information of those concerned it is suggested that those desiring to read papers in any of the sections should communicate at once with the chairmen of such section they may wish to appear

before. Section chairmen have sole charge of their programs and no one has authority to override their decisions or arrangements. Much aid may be given them by early preparation of papers in duplicate in order that copies may be supplied those who may desire to open the discussion of such offerings.

All exhibits are under the sole charge of the Secretary-Editor.

The program will be made up early enough to appear as fully as possible in the May issue of the Journal which issue should be mailed fairly early in May. To do this it will be necessary that every program of sections and other activity of the meeting be arranged far in advance of the date of the meeting, which date will be exactly determined after other meetings to be held in that month are determined.

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### *Editorial Notes—Personal and General*

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DR. T. FULLER, Vanoss, has removed to Oklahoma City.

DR. M. L. LEWIS, Ada, has just returned from the Mayo Clinics.

DR. and MRS. LEONARD WILLIAMS, Pawhuska, announce the birth of a son on November 12.

DR. A. G. COWLES, Ardmore, assistant surgeon at the Hardy Sanitarium, is visiting in Louisiana.

DR. D. B. ENSOR, Hopetown, returned from a six weeks' visit in Tennessee, Virginia, and Washington, D. C.

DR. C. O. GOSE, Hennessey, visited his daughter Mrs. A. H. Lee of Boone, Iowa, recently, who is ill with influenza.

DR. J. T. FRIZZEL, Clinton, has been appointed city health officer. Dr. Frizzel has recently moved to Clinton from Butler.

DR. and MRS. A. L. BLESCH, Oklahoma City, attended the Western Surgical Convention at Colorado Springs in November.

DR. C. M. AMENT, Tulsa, fell from a stepladder and sustained a compound fracture of the right leg two inches above the ankle joint recently.

DR. A. E. DAVENPORT, Oklahoma City, former State Health Commissioner, has opened an office to resume private practice in Oklahoma City.

COAL COUNTY MEDICAL SOCIETY has elected the following; Dr. J. J. Hipes, Coalgate, President; Dr. Frank Bates, Coalgate, Secretary-Treasurer.

DR. and MRS. W. S. MASON, Claremore, are the proud parents of a bouncing nine pound daughter who arrived at the Sand Springs Hospital December 6.

BURBANK, OKLAHOMA, is a town without a doctor, since the death of Dr. C. C. Smith about a month ago. The townspeople say it is both inconvenient and expensive.

DR. A. J. JETER, Clinton, is attending the Toronto Hospital where he is doing research work under Dr. Banting, accompanied by his brother, Dr. Tom Jeter, of Forth Worth.

DR. R. B. HAYES, Guymon and Miss Della Wilson were married at Liberal, Oklahoma, on November 20, and are taking a short honeymoon trip to Hutchinson and Wichita.

DR. and MRS. D. F. JANEWAY, Stillwater, have received announcement of the birth of a daughter to their daughter, Mrs. Samuel J. Krepps, at Cleveland, Ohio, November 22.

DR. J. E. HARBISON, Oklahoma City, is reported to head a group of physicians who are negotiating for the purchase of the Baptist Hospital there, to be continued as a hospital.

McINTOSH COUNTY MEDICAL SOCIETY met December 4th, with the following program: "Insulin," Dr. C. W. Heitzman, Muskogee, Clinic, report of cases. The Business Side of the Profession.

DR. F. B. FITE, Muskogee, has been selected as one of the one hundred Oklahoma citizens honored by the planting of a tree in Oklahoma City, under the auspices of the state board of agriculture.

MAURICE WILLOWS HOSPITAL for colored has been hard hit by the financial depression and the Tulsa County Medical Society recently gave them a check for \$100 to help tide them over the tight period.

DR. J. B. Leisure, Watonga, and Mrs. Edna Kirby of the same place were married at Oklahoma City in November. The couple are enjoying a trip to the East where the Doctor is taking some post graduate work.

CREEK COUNTY MEDICAL SOCIETY elected for its officers for 1924 Dr. L. H. Starr, Drumright, President; Dr. W. P. Longmire, Sapulpa, Vice President, and Dr. C. L. Blakesly, Drumright, Secretary-Treasurer.

DR. J. WINTER BROWN, formerly of Tulsa but residing at Stoneboro, Pa., since his operation in July, 1922, writes that his condition is about the same and that he does not expect that he will ever be able to resume practice.

DOCTORS JOHN R. CALLAWAY, JAMES R. CALLAWAY and J. W. STEPHENS, Pauls Valley, have opened new offices in the First National Bank Building, and will have associated with them Dr. C. S. Garland, dentist.

ALFALFA COUNTY MEDICAL SOCIETY elected the following as new officers for 1924: Dr. James Stevenson, Cherokee, President; Dr. J. W. Lynes, Byron, Vice President; Dr. H. A. Lile, Cherokee, Secretary-Treasurer.

DR. W. A. LACKEY, Oklahoma City, has examined over one thousand school children within the last few months in his capacity as medical inspector of the city schools; making a total of more than ten thousand examinations since the schools reopened.

PONTOTOC COUNTY MEDICAL SOCIETY was banquetted by the Ada Hospital December 11. A good meeting was held and everybody and his wife enjoyed themselves immensely. Dr. S. P. Ross, Ada, was elected President and Dr. B. B. Dawson, Ada, Secretary for 1924.

LATIMER COUNTY MEDICAL SOCIETY met on December 17 at Wilburton and elected officers for 1924, as follows: Dr. R. L. Rich, Red Oak, President; Dr. C. R. Morrison, Red Oak, Vice President; Dr. J. F. McArthur, Wilburton, Secretary-Treasurer; Drs. E. L. Evins and J. F. McArthur, Censors.

WASHINGTON COUNTY MEDICAL SOCIETY on Dec. 11th elected new officers for 1924 as follows: Dr. J. G. Smith, Bartlesville, President; Dr. James Vansant, Dewey, Vice President; Dr. J. C. Dunn, Bartlesville, Secretary; and Dr. W. E. Rammel, Treasurer. The annual Society Banquet will be held in January.

DR. JOHN I. GASTON, Madill, recently suffered the total loss of his office and equipment, including his diploma and State certificate, when that town was visited by a fire involving a loss of about \$150,000. Dr. Gaston wants to hear from any physician having used equipment for sale, so that he can reestablish his office.

OSAGE COUNTY MEDICAL SOCIETY elected the following new officers for 1924: Dr. G. E. Stanbro, Pawhuska, President; Dr. E. N. Lipe, Fairfax, Vice President; Dr. Leonard C. Williams, Pawhuska, re-elected Secretary-Treasurer; State Delegate, Dr. Roscoe Walker, Pawhuska; Executive Committee, Drs. Goss, White and Worten.

LIABILITY for Injury by X-Ray—The mere fact that an X-ray machine is a dangerous instrument is held in *Stemons vs. Turner*, 274, Pa. 228, 117 Atl. 922, not to impose upon one using it to diagnose the ailment of a patient the burden of answering in damages for injury inflicted by it, in the absence of anything to show negligence on his part.

NOTICE OF CHANGE OF ADDRESS—Physicians are reminded that it is necessary under the present law to notify the collector of Internal Revenue, narcotic division, of any change in office address. Failure to do so means a fine of 25 cents for each month passed since removal, and an additional fine at the next registration to prescribe narcotics.

DR. LIONEL MCCLURE, Lawton, has the honor of heading a list of 171 new doctors taking an examination before the National Examining Board, which passes on the eligibility of doctors to practice in all states of the union. Dr. McClure is now serving a two year internship in the Massachusetts General Hospital and is a recent graduate of Harvard.

DR. ELLIS MOORE, Oklahoma City, has returned from special interne and post graduate work at the Brady Institute, Johns Hopkins Hospital, under Dr. Hugh Young, and while there also assisted Dr. Geraghty in his office. Dr. Moore has been associated with Dr. W. J. Wallace for more than two years, and they have since formed a partnership.

THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER, composed of Goiter Surgeons, Pathologists, Anaesthetists, Internists, and Radiologists, will have its annual meeting in Bloomington, Illinois, on the 23rd, 24th and 25th of next January. An excellent program of papers, demonstrations and diagnostic and operative clinics is promised.

PITTSBURG COUNTY MEDICAL SOCIETY has made the following selections as its officers for 1924: President, Dr. J. F. Park, McAlester; Vice President, Dr. T. T. Norris, Krebs; Secretary-Treasurer, Dr. F. L. Watson, McAlester; Censor, Dr. O. W. Rice, McAlester; Delegates State Meeting, Drs. F. J. Baum and J. A. Munn, McAlester; Alternates, Drs. O. W. Rice and T. H. McCarley, McAlester.

OTTAWA COUNTY MEDICAL SOCIETY met on December 19 and elected the following new officers: Dr. G. A. De Tar, Miami, President; Drs. W. A. Sibley, Cardin; H. K. Miller, Fairland; L. W. Troutt, Afton; M. P. Willis, Commerce, Vice Presidents; Dr. G. Pinnell, Miami, reelected Secretary-Treasurer; Drs. R. H. Harper, Afton; M. M. DeArman, Miami, and G. P. McNaughton, Miami, Censors.

PHYSICIAN AND SURGEON—right to make exploratory incisions. The general directions of a patient to his surgeon authorizing him to perform an operation for the cure of a certain specific physical ailment is held in *King vs. Carney*, 85 Okla. 62, 204 Pac. 270, not only to authorize the surgeon to operate, but by clear implication authorize him to diagnose the case for the purpose of discovering for himself the exact cause of the malady he is called upon to treat, and to make whatever initial exploratory incisions may be necessary for this purpose.

CUSHING MEDICAL SOCIETY met at Cushing December 11, as the guests of Dr. J. A. Martin. Two very interesting cases were demonstrated; one being an infant minus an extremity, the case being thoroughly discussed by Dr. Ben Davis. The second, Dr. Davis reported a case of Colles (forearm) Fracture as a result of cleaning "Sparkplug." Curiously enough, after swallowing hook, line and sinker, Dr. Davis felt an urgent call to leave very precipitately. Election of officers resulted as follows: Dr. E. M. Harris, President; Dr. J. V. Blair, Vice President, and Dr. J. Walter Hough, Secretary and Treasurer.

PAYNE COUNTY MEDICAL SOCIETY met at Stillwater December 18 and elected the following officers: President, Dr. John A. Martin, Cushing; Vice President, Dr. C. E. Sexton, Stillwater; Secretary-Treasurer, J. Walter Hough, Cushing; Delegate, Dr. Benjamin Davis, Cushing; Alternate, Dr. L. A. Cleverdon, Stillwater. It was voted that members of the Society abstain from

placing professional cards in newspapers, hotel registers, theater programs, etc., Drs. Adams, Manning and Harris were appointed a committee of entertainment for the next meeting at Cushing, January 22. A paper on "Ununited Fractures" was read by Dr. W. H. Sisler, Bristow.

**MUSKOGEE COUNTY MEDICAL SOCIETY** met in annual meeting around the festive board at the Country Club on Dec. 10. The staff of the Soldiers Memorial Hospital were present and everyone seemed to enjoy not only the excellent dinner provided, but the good fellowship that prevailed. The Secretary, after serving eight years, is authority for the statement that Muskogee County Society is blessed with a membership of broad-gauged fellows who have put aside "the petty jealousies that mar and dwarf and tell the story of our weakness." Dr. M. K. Thompson was elected President, Dr. J. T. Nichols, Vice President, Dr. A. L. Stocks was re-elected Secretary-Treasurer, and Dr. C. E. DeGroot, Censor.

**WOODS COUNTY MEDICAL SOCIETY** held a very successful meeting November 30 in Alva, with every doctor in the county present. A meeting for the ladies of the county was held at the same hour in charge of Miss Lulu Shoemaker of the Child Welfare Bureau of Oklahoma City. Dr. Ralph W. Hissem of Wichita gave an illustrated lecture to the doctors on pyonephrosis and obstruction of the ureter. A banquet was held at 6 p. m. for the doctor and their wives. At 8 p. m. Dr. John B. Wood of Kansas City gave a lantern lecture on vitamins, to which the public was invited. It was one of the most successful meetings ever held in the county. Woods County Society meets every two months. Officers for 1924: Dr. Arthur E. Hale, Alva, President; Dr. Isaac S. Hunt, Freedom, Vice President; Dr. Oscar E. Templin, Alva, Secretary-Treasurer.

**AMERICAN CHILD HEALTH ASSOCIATION** announces that its resident and travel scholarships for physicians have been awarded to the following candidates:

Dr. Charles Armstrong, Salisbury, N. C.; Dr. William W. Bauer, Milwaukee, Wis.; Dr. R. L. Carlton, Winston Salem, N. C.; Dr. Eugene C. Chimene, Minneapolis, Kans.; Dr. William De Kleine, Saginaw, Mich.; Dr. Seymour Fiske, New York; Dr. Arthur M. Kimberly, Bristol, Conn.; Dr. George A. Lamont, Vancouver, B. C.; Dr. George N. Leonard, Albany, N. Y.; Dr. Marie M. Long, Memphis, Tenn.; Dr. George C. Marlette, Bay Minette, Ala.; Dr. Walter R. Moore, St. Joseph, Mo.; Dr. Russell B. Sprague, Yarmouth Port, Mass.; Dr. Thomas D. Walker, Macon, Ga.; Dr. Ruth Weismann, Dorchester, Mass. The purpose of the scholarships is, broadly, to stimulate interest in child health work and to provide means for better training of physicians along this line.

**TULSA COUNTY MEDICAL SOCIETY ANNUAL MEETING** was the best attended of any during the year. The Society met December 10 for the election of officers. Dr. Horace T. Price was elevated to President-Elect from the Secretaryship. Dr. J. H. Laws of Broken Arrow was elected Vice-President and Dr. Chas. H. Haralson was elected Secretary-Treasurer. The Delegates selected for the coming two years are: W. A. Cook, Ball, Osborne, P. C. White, Dunlap, Emerson and

Ford. The Alternates; Bradley, Cohenour, Bryan, Summers, Huber, Laws, Johnson. Dr. J. L. Reynolds presented his transfer from Durant. Dr. A. V. Emerson is the incoming President and Dr. Roy W. Dunlap the retiring one. Over 100 were in attendance at the meeting. The First January meeting will be at the Oklahoma Hospital where a Medical clinic will be held.

The annual report of the Tulsa County Medical Society showed it to have 159 members and a healthy balance in bank after having entertained the State Medical Association, made contribution to the Colored Hospital and paid a heavy lawyer's bill. Beginning in January all the doctors in the Seventh District will receive a copy of the Bulletin of the Tulsa County Medical Society, just the same as the members. This is an invitation to them to attend the meetings if convenient. It is the hope of the Program Committee to have meetings of merit and interest to repay the out-of-town visitor for his trip.

**INCOME TAX RETURNS.** In the making of his 1923 income tax return, the . . . professional man, . . . may deduct from gross income all items properly attributable to business expenses. A . . . doctor, . . . may deduct the cost of supplies used in his profession, expenses paid in the operation and repair of an automobile used in making professional calls, dues to professional societies, subscriptions to professional journals, office rent, cost of light, heat, and water used in his office, and the hire of office assistants. In computing his net income . . . a taxpayer may deduct from gross income all losses, incurred not only in his . . . profession, but in any "transaction entered into for profit" not compensated for by insurance or otherwise. Losses arising from fires, storms, shipwrecks, or "other casualty"—for example, a flood or frost—whether or not connected with the taxpayer's business, may be deducted from gross income in his 1923 income-tax return. If his home or automobile is destroyed by fire, the loss is deductible for the year in which it occurred.

Loss of property by theft or burglary is an allowable deduction and need not be incurred in trade or business. A loss for embezzlement is also deductible.

All losses are deductible only to the extent by which they are not compensated for by insurance or otherwise. Deductions for bad debts and contributions, which are allowable under the revenue act, form a considerable item in the income-tax returns of many taxpayers. Bad debts can be deducted only for the year in which they are ascertained to be worthless and charged off the books of the taxpayer. The return must show evidence of the manner in which the worthlessness of the debt was discovered and that ordinary and legal means for collection have been or would be unavailing. The period for filing income tax returns for the calendar year 1923 ends at midnight of March 15, 1924.

### DOCTOR LEM H. WINBORN

Dr. Lem H. Winborn of Tuttle, Oklahoma, died suddenly December 1, 1923, in a Chickasha hospital from a complication of diseases. He had been a practicing physician in his last location for over fifteen years, and, although his health had been bad for some time, his sudden death came as a great shock to his associates and friends.

Dr. Winborn was born in Kentucky in 1873, and graduated in medicine in 1908 from the Louisville Hospital and Medical College. He was an active member of the Grady County Medical Society and the State Association, and a fellow of the American Medical Association. Dr. Winborn is survived by his wife and two brothers.

The following resolutions were adopted by the Grady County Medical Society:

WHEREAS: An all-wise Providence compels us to pause in our warfare against disease and death, and note the passing of our esteemed colleague and friend, Dr. L. H. Winborn, to his eternal rest.

RESOLVED: That in his death the Grady County Medical Society has sustained the great loss of one of its most valued and honored members, a true physician, a trusted friend and an efficient counselor.

RESOLVED: That we prize at its full worth the memory of his unselfish deeds, his noble aspirations and untiring zeal to elevate the standard of his profession.

RESOLVED: That with deep sympathy to his wife and relatives we express an earnest hope that even so great a bereavement may be overruled for their highest good.

RESOLVED. That these resolutions be entered in the records of the Society, that a copy be sent his wife, and that they be published in our State Journal, and papers of the city in which he lived and worked so long.

"The Spring will dress his narrow bed  
With all the wild flowers that he loved.  
And around his rest a fragrance shed,  
Pure as that virtue he approved."

Drs. U. C. Boon, W. H. Livermore, H. C. Antle, Committee.

### NEW AND NONOFFICIAL REMEDIES

Butesin.—*n*-butyl-para-aminobenzoate. Butesin is the normal butyl ester of 4-aminobenzoic acid. The actions and uses of butesin are similar to those of benzocaine (anesthesin), which is the ethyl ester of 4-aminobenzoic acid (see New and Nonofficial Remedies, 1923, p. 41, Anesthetics, Local, Difficultly Soluble). Butesin is used as a dusting powder, either pure or diluted. It may be used in the form of troches, ointment, suppositories or dissolved in a fatty oil. Butesin is a white, crystalline powder, odorless, tasteless, almost insoluble in water, but soluble in alcohol, chloroform, ether and in fatty oils. The Abbott Laboratories, Chicago. (Jour. A. M. A., Nov. 3, 1923, p. 1523.)

Silver nitrate solution in capsules—P. D. and Co.—An aqueous solution of silver nitrate con-

tained in capsules composed of beeswax with an inner lining of a hard paraffin. The solution is intended for the prophylaxis of ophthalmia neonatorum in the newborn. The solution is marketed in two forms: Capsules containing 6 minims of a 1 per cent. solution, capsules containing 6 minims of a 2 per cent. solution. Parke, Davis and Co., Detroit. (Jour. A. M. A., Nov. 24, 1923, p. 1789.)

### PROPAGANDA FOR REFORM

The Menace of "Moonshine" Whiskey. The untoward results of overindulgence in whisky have usually been ascribed to its alcoholic content, although now and then ill-defined "by-products" of fermentation present in the distillate have been charged with a toxicity out of all proportion to the quantities ordinarily present. The indefinite "fusel oil" and furfural were often designated as the pernicious ingredients. In properly made and suitably aged whiskies, such constituents could at most play only a minor part in the intoxication produced. While alcoholism is less prevalent today than it was a few years ago, its attendant and after effects on its victims are more serious. The impression is broadcast that this is due to the "moonshine" liquor which is being distributed. The danger from the presence of methyl alcohol in "moonshine" whisky is well-known. Its presence is explained by the use of denatured alcohol (which may contain methyl alcohol) in the preparation of "moonshine" whisky. However, the investigation of the federal authorities indicate that ordinarily methyl alcohol is not the pernicious constituent of illicit whisky, but instead the product has been found often to contain a high proportion of acetaldehyd. The "ranker" the liquor, the higher the aldehyd content. (Jour. A. M. A., Nov. 10, 1923, p. 1611.)

The Composition of Some Complexion Clays.—Next to nostrums sold for the alleged rejuvenation of the male, the most popular form of contemporary charlatantary lies in the exploitation of alleged beautifiers for the female. During the last year or two the cosmetic market has been glutted with a veritable avalanche of so-called complexion clays and face packs. The A. M. A. Chemical Laboratory has analyzed the following preparations of this class: "Terra-derma-lax," "Boncilla," "Domino Complexion Clay," "Mineralava," "Ryerson's Forty Minute Beauty Clay." The laboratory reports that each of the preparations was a bluish mass of the consistency of soft putty and resembled a mixture of clay and water. With one exception, no substance other than clay, water and perfume was found in the preparations. Domino Complexion Clay contained about five per cent. of glycerin and about 0.2 per cent. of a salicylate, probably sodium salicylate. The examination indicates that the clays analyzed are not high grade products, nor carefully purified before being used. (Jour. A. M. A., Nov. 10, 1923, p. 1624.)

Pregl's Solution.—It has been stated that Pregl's (isotonic) iodine solution is probably prepared by treating a solution of sodium carbonate with finely powdered iodine. When the iodine has dissolved, sodium chlorid is added and the solution diluted to a definite volume. The produce is stated to contain sodium ions, free iodine, iodid ions, hypiodite and iodate ions—this in addition to the carbonate and chlorid. A proprietary brand of this solution is sold in Germany as "Presiod."

All favorable reports of the therapeutic use of Pregl's solution have had their genesis from apparently biased sources. (Jour. A. M. A., Nov. 10, 1923, p. 1628.)

**Iridinol.**—The Council on Pharmacy and Chemistry reports that about fifteen years ago "iridium (Medicinal)" was put on the market by the Platinum Company of America, and the same company manufactured "Iridinol" which was marketed by the P. H. Potter Chemical Company (now P. H. Potter and Sons, Inc.) New York. Both products were, at that time, claimed to contain iridium and were marketed for a high price with grossly misleading claims for the efficacy of iridium as a therapeutic agent. Iridium (Medicinal) seems to have been abandoned, but Iridinol, advertised by P. H. Potter and Sons, Inc., as an "ethical preparation" continues to be sold. In the earliest advertising Iridinol was claimed to be a "non-toxic preparation of iridium." At that time the A. M. A. Chemical Laboratory was unable to detect the presence of iridium, and it was concluded that no very large amounts of iridium could have been present. Regardless of the presence or absence of iridium, there is not the slightest evidence for the therapeutic value of this metal in the conditions for which it is recommended by the exploiters of Iridinol. In the present advertising for Iridinol no definite claim is made for the presence of iridium. Instead the agents merely imply its presence. Iridinol is recommended by the exploiters in anemia, rheumatism, specific blood diseases, diseases of the nose and throat, of stomach organs, liver and kidneys, of the nervous system, diseases of children and as a systemic alternative. In view of the long-continued activities of P. H. Potter and Sons, Inc., for the use of Iridinol, the Council authorized publication of a report for the information of physicians who may be importuned to use it. (Jour. A. M. A., Nov. 24, 1923, p. 1807.)

**Whooping Cough Vaccine.**—In a series of articles on biologic therapy prepared under the auspices of the Council on Pharmacy and Chemistry, W. C. Davidson (The Journal, Jan. 22, 1921, p. 242) concluded a review of the use of pertussis bacillus vaccine thus: "In summing up the prolific and somewhat contradictory literature on this subject, it may be concluded that injections of Bordet-Gengou bacillus vaccines may have a slight though unreliable prophylactic effect, and that therapeutic inoculations are of practically no value. Further experiments are necessary to raise this procedure from the limbo of non-specific therapy." The Council on Pharmacy and Chemistry has accepted pertussis bacillus vaccine for New and Non-official Remedies, but states in regard to the usefulness of the product: "The evidence indicating that it is of value for either prevention or treatment is very questionable, and the reports are conflicting." (Jour. A. M. A., Nov. 24, 1923, p. 1809.)

### GENERAL SURGERY

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### OLD MASTERS

Guy de Chauliac, (1300-1370) was the most distinguished authority on surgery in the fourteenth and fifteenth centuries. He was a country boy and through his friends was enabled to take

Holy Orders and get an excellent medical education at Toulouse and Paris, with a special course in anatomy at Bologna.

He became the most erudite surgeon of his time and was physician to Pope Clement VI and his successors. He was indeed, the only medical historian of consequence between Celsus and Haller. As an operator he set great store by the study of human anatomy (too bad some modern operators do not do this—Ed.) and was one of the first to take the operations of hernia and cataract out of the hands of strolling mountebanks, although he hesitated to cut for stone.

He believed in cutting out cancer in an early stage with the knife, but employed the actual cautery in the fungus variety as well as in caries, anthrax and similar lesions. He suspended fractures in a sling bandage, or if in the thigh, by means of a weight and pulley. He was a reactionary in the important matter of the treatment of wounds, and by his great authority, threw back the progress of surgery for some six centuries, giving his personal weight to the doctrine that the healing of wounds must be accomplished by the surgeon's interference—salves, plasters, etc.—rather than by the healing power of nature. He was an ethical teacher, a gentleman and a scholar. During the plague at Avignon in 1348-1360, he stuck manfully to his post while other physicians fled the locality.

### EXCISION OF A V-SHAPED PIECE OF THE LOWER LIP VERSUS ROENTGEN RAY OR RADIUM TREATMENT.—Bloodgood, Jos. Colt. J. A. M. A., Nov. 24, 1923. p. 1806.

The author reports the case of a man, who, seven months before, had been treated for a small ulcer of the lower lip by radium. At the present time a mass the size of an egg presents in the submental area, slightly fixed to the lower jaw, which has been present for the past three months.

These cases in which the lesion heals or apparently heals after the application of Roentgen rays or radium and then, after a few months or years later, enlarged glands appear in the neck, which when removed, prove to be metastatic cancer, are by no means infrequent. The author thinks cases of this kind are increasing in number.

Some years ago he made a report on the operative treatment and results of cancer of the lower lip, and will in time make another report on a large number of cases. The conclusions of the first report are confirmed by a restudy of the cases in these reports. Excision of the lesion by V-shaped incision and the wound closed without a plastic operation shows no recurrence whether the lesion was benign or malignant. The operation is done under a local anesthetic. A microscopic study should be made of the piece excised, then if the section shows cancer, the glands of the neck are removed.

When the glands show no metastasis the percentage of cures has been 100 per cent: When metastasis was present the cures were 50 per cent; in his second report they will be somewhat larger.

He divides lesions seen in the lower lip into five classes as follows:

1. Lesions of short duration in men who chew and smoke and have bad teeth; these usually by removal of bad teeth and nonuse of tobacco, and

by keeping the mouth clean and the lip covered with petrolatum, get well.

2. Lesions of longer duration, still benign—such as leukoplakia, or chroically chapped lip of the smoker, cured by stopping the use of tobacco in any form.

3. Lesions of the two former groups which do not disappear under treatment, or when of longer duration, and which clinically cannot be distinguished between benign and malignant.

4. Distinct benign—as a wart.

5. Distinctly cancer.

Groups three, four and five should be excised at once and the glands of the neck should be removed, if the microscope shows the lesion to be cancer. The author feels that the cure of these cases by X-ray radium, etc., might lead to fallacious conclusion, without microscopic evidence to confirm the lesion.

It is important to know if the lesion is cancer, and if so, to remove completely the glands of the submaxillary and submental areas. Today there is every evidence that complete removal of the glands of the neck offers more than any other known treatment.

He has no objections to X-ray and radium over the lymphatic area, before and after the thorough removal of the glands but, removal of the glands is the essential feature; unless the microscope shows metastasis post operative irradiation is not necessary.

The author is willing to submit the evidence of the Surgical and Pathological Laboratory of the Johns Hopkins Medical School to any investigating committee for comparison of the X-ray, radium or any other types of treatment. More than 60 per cent of the lesions of the lower lip he has excised are microscopically benign and of the remaining 40 per cent, in more than 75 per cent, the glands, when removed show no evidence of metastasis.

#### APPENDICITIS, SOME DIAGNOSTIC HINTS IN.—Earle, Robert. Minnesota Medicine, Vol. V. No. 10.

The importance of prompt diagnosis in appendicitis is so great that attention is called to the fact that where it begins with a chill, gangrene of either the mucous membrane or of the outer layers of the appendix is probable and a chill followed by fever points to infection.

There is always fever in the early stages; it is an important feature and many will not operate where there is no certainty of fever during the first thirty-six hours.

Pain in the appendix region with absence of gastric symptoms is generally salpingitis, oophoritis or some similar condition, rather than appendicitis.

Especially in children pleurisy may be the source of pain and this is relieved by cessation of breathing as indicated when the hand can be pressed into the abdomen and causes no pain between breaths. These patients will not be relieved unless the true cause of the pain is removed.

### OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M. D.  
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#### A COMPARISON OF THE VALUE OF MILK AND ORANGES AS SUPPLEMENTARY LUNCH FOR UNDERWEIGHT CHILDREN.—Margaret S. Chaney, M. A., Amer. Journal of Diseases of Children, Oct., 1923.

The study of nutrition, as applied to the school child, has at the present time a well defined place in the school program. Physical fitness is an unparalleled asset to the adult.

The conclusion has been reached that rational feeding in infancy and childhood has a vital relationship to the development of physical strength and of resistance to infection.

"A scale in every school," and "A quart of milk a day for the growing child," are nation wide slogans. One of the most common methods of overcoming undernutrition among school children is the introduction of a supplementary lunch, consisting of milk and crackers.

A comparison of growth variation in underweight children as influenced by different types of supplementary lunches has been made. The children were free to gain, as far as could be determined by physical and dental examination. The economic status of the majority of the homes permitted provision of adequate food. The results seem to demonstrate that:

1. A mid-morning lunch is of value in overcoming a condition of underweight in children.

2. Oranges, as fed to the children in this investigation, seem most efficacious in producing a gain in weight. This may be due to the vitamin content of the orange.

3. Milk, while it produces a favorable increase in weight, is not the only food valuable for the midmorning lunch. The less marked gain in weight which milk produced in this test may be due to its lack of antiscorbutic vitamin and to its retarding effect on the appetite.

4. Concentrated bottled orange juice appears to be of marked value in stimulating growth of the underweight child. While it has not proved equal to fresh oranges, it is quite effective, and may, if the fresh fruit is not available, supply the vitamins necessary for growth.

#### OBSERVATION ON THE EFFECT OF COMPLEMENTAL FEEDING IN NEW-BORN INFANTS.—Harold A. Bachman, American Journal of Diseases of Children, Nov. 1923.

The question of loss of weight in new-born infants during the first few days of life is taken up. Clinical and scientific observations heretofore have agreed that this is a physiological process, and consequently should be recognized and no interference with nature should be made. It is also claimed that the intestinal tract is still immature; that the normal intestinal flora is disturbed if other foods are offered before the advent of the mothers milk, and that such interference produces later intestinal disturbances. Bachmann says these arguments, though impressive on paper, are not always clinically sound, and he feels there is sufficient evidence to refute them.

His investigations were conducted in St. Luke's Hospital, Chicago. His aim was, (1) to outline

a simple procedure which would not overburden an already busy obstetric ward; (2) to observe to what extent the initial loss of weight could be effected; (3) to prevent any enormous early losses, and also to hasten a return to birth weight, and (4) to prescribe various formulas for new-born infants, in an effort to estimate, if possible, which was the most efficacious.

In the reported series are 511 infants, which include both the infants of primiparas and those of multiparas. Only babies definitely normal as far as could be ascertained are reported.

The cases were divided into nine groups. To group one was given ordinary routine care without ordered food. In other words it was a control group. Group two had ordinary routine care with definite orders regarding the giving of sterile water. Group three 5 per cent glucose in Ringers solution. Group four 10 per cent glucose in Ringers solution. Group five Albumen milk. Groups 6, 7 and 8 modified cows milk. Group 9 condensed milk.

He found no evidence of immaturity of the intestinal tract at birth or any marked distortion of the bacterial flora after early additional feedings among premature infants or twins. In every group there was a definite decrease in the initial loss of weight. This was true even with the giving of sterile water, but under a definitely prescribed schedule. No digestive disturbances were noted in any group, either while the food was given or after the secretion of the mothers milk was established. In checking up on seventy-five of these babies, all showed normal progress or gains anywhere from one month to eight months after discharge. The babies on formulas showed an average loss of 5 per cent of the body weight rather than the generally accepted 9 per cent. Sixty-nine per cent showed a return to birth weight before the tenth day. No definite conclusions seem warranted as to which type of food is most advantageous, but the best results were obtained with formulas containing a relatively high sugar content.

The writer thinks the conclusion is warranted that the giving of simple formulas to the new-born infant is perfectly justifiable and that it causes no clinical disturbances.

The ordered formulae were given through the fifth day and discontinued as there seemed to be no further need for them.

#### ACTIVE IMMUNIZATION AGAINST DIPHTHERIA IN PRIVATE PRACTICE.—Frank C. Neff, J. A. M. A., Sept. 1, 1923.

Neff's conclusions are summed up: The medical profession should be aroused to the need and usefulness of active immunization to diphtheria.

Routine private practice must include the education of families in the use of toxin-antitoxin. It is obvious that the medical profession will be the final authority with the public as to the desirability of diphtheria immunization.

The systematic administration of toxin-antitoxin is easy, and if employed in private practice the demand for it will eventually reach throughout the community.

The use of refined toxin-antitoxin as now available is safe, and the physician need have no hesitancy in making diphtheria immunization part of his regular work.

It is conservative to state that 90 per cent of persons receiving toxin-antitoxin develop immun-

ity, and that there is a small percentage of persons who develop antitoxin poorly, if at all. That there are a few exceptions can be recognized.

No child should be accepted as immune until a negative Schick test is obtained.

#### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

#### THE CAUSE OF BOTHRIOCEPHALUS ANEMIA.—Russell L. Haden, Amer. Jr. of Med. Sciences, Sept. 1923.

The fish, being the intermediate host, those peoples that habitually eat large quantities of poorly cooked fish are most frequently infected. The condition is met most commonly in Russia, Scandinavia, Switzerland, China and Japan. It is extremely rare to find cases that have originated in the United States.

The most interesting part of the infection is the anemia that accompanies about 10 per cent of the cases, which cannot be distinguished clinically from idiopathic pernicious anemia. This, therefore, makes it distinctly different from the secondary anemia that accompanies other types of parasitic infections.

The cause of this primary type of anemia has been variously explained. Faust and Tallquist advanced the theory that thru death of the parasite in the intestinal canal, hemolytic substances were absorbed by the host and brought about the changes in the blood and bone marrow. This theory has received little recognition.

The author reports one case which supports this view and gives the following as his summary:—"The patient had probably harbored the parasite for six years without showing any symptoms. There was an anemia of sudden onset which quickly disappeared after the worm was expelled. When recovered a large part of the worm was in a state of decomposition."

#### DIGESTIVE HEMOLYSIS AS A TEST OF LIVER FUNCTION.—A. L. Levin, Southern Med. J., Nov. 1923.

Widal and others, (Press. Med., Dec. 1920) proposed the test consisting of studying the hemolytic crisis after the patient has drunk a glass of milk. It must be given on an empty stomach. The variation in the number of leucocytes, blood pressure changes, and coagulation time of the blood is observed for a period of one to two hours. The test is based on the following facts:

1. During the ingestion of a meal of albumins, proteins incompletely changed reach the portal circulation and provoke a hemolytic crisis.

2. If the liver is functioning normally it exercises an arresting influence upon these substances and prevents a hemoclasia.

The author reviews the literature very thoroughly and gives his observations on forty cases, including five normal individuals. He draws the following temporary conclusions.

1. Liver pathology can probably be detected early by the test of digestive hemoclasia of Widal.

2. In our study of gall bladder infection, we should bear in mind that the pathology often begins from the liver end, and if so, direct our at-

tention to that organ first.

3. The so-called cases of intestinal toxemia and simple indigestion are probably of hemoclastic origin.

4. Hepatic opotherapy undoubtedly influences the Widal hemoclasia test.

5. A large percentage of cholecystitis and cholelithiasis cases give a positive hemoclasia of Widal.

6. Diseases arising from protein hypersensitivity-ness should be studied by this test.

7. The test is not conclusive but it invites enough interest for further observation and study.

8. It should be adopted as a routine laboratory test.

#### THE TONSIL AS A SOURCE OF SYSTEMIC INFECTION AND TOXEMIA.—Edward F. Wright, Greenville, Tex.; Tex. State JI. of Med., October, 1923.

The author reviews the gross and microscopic anatomy of the tonsil and gives this as an explanation as why the tonsil is such a frequent cause of systemic infections. He likens the crypts of the tonsil to the crypts of Leiberkuhn in the small intestines and shows that in some locations in these crypts the epithelial lining is only one to three cells thick with no sub-mucous connective tissues. This arrangement gives a very weak barrier between the accumulation of bacteria in the crypts and the lymphatics which lie immediately beneath. The lymphatics themselves run only a very short distance, passing thru two chains of glands, before emptying into the thoracic duct.

In describing the pathologic or toxic tonsil, the author gives several special methods of examination to be carried out in order to determine whether or not the tonsil is diseased. He emphasizes the importance of the conditions of the neighboring structures and the lymphatics which drain the area.

#### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

#### A SERIES OF 100 CASES OF CATARACT REMOVED UNDER A SUB-CONJUNCTIVAL BRIDGE.—Killick, C. Brit. J. Ophth., 1923, vii, 320.

The method described by the author is copied after that of Terrien whose technique was very similar to that of Desmarres. The incision is made with puncture and counter-puncture at the limbus and the section is completed with a conjunctival flap which is not cut through but left as a bridge. The bridge varies in width; the average width is about 4 mm. When the section has been completed the flap is turned backward and made to glide beneath the conjunctiva as far as possible, as the longer the bridge the easier the extraction and the broader the bridge the better the coaptation of the wound lips. Care must be taken to keep the knife edge from touching the speculum. The ordinary technique is then followed except that everything is done subconjunctivally. If the combined extraction is performed, the author prefers the innerside of the right eye for the coloboma and the outer side of

the left eye. In selected cases simple extraction is preferred.

After the capsule has been opened with a cystotome, the ease of extraction depends upon the kind of lens and upon the bridge. Depressing the upper lip of the wound with a spatula to assist in the delivery of the lens is unnecessary as simple pressure is sufficient. As the bridge will not permit overgaping of the wound, considerable pressure may be exerted. After the lens has started, gentle guidance upward and laterally is all that is necessary. Once in a while division of the bridge may be necessary. The operation is concluded in the usual way, smoothing out the iris and instilling atropine in cases of iridectomy and eserine in the others. A single or bilateral pad is applied and the patient allowed to walk back to his room from the operating room. At the end of twenty-four hours the eye is examined and the dressings changed. The patient is allowed to get up in from twenty-four hours to three days and glasses are given on the fifth, sixth, or seventh day.

The operation is ideal for a fully ripe cataract. The advantages are that it safeguards against infection and loss of vitreous and that the surgeon has complete control of the eye when the bridge has been fashioned.

#### THE SURGERY OF HARELIP AND CLEFT—PALATE DEFORMITIES.—Gibbon, J. W.; South. M. & S., 1923, lxxxv, 355.

Embryologically, the closure of the lip and palate proceeds from front to back; the lip first, then the alveolus, then the hard palate, and finally the soft palate. By the eleventh week of intra-uterine life, the union of the parts forming the lip, alveolus and palate is usually complete.

The author believes that if the general condition is satisfactory, harelip should be repaired before the child is three months old and that the bone repair should be completed at the ninth or tenth month. This is in accord with the views held by Berry, New, Richie, Thompson, Roberts, Davis and others but contrary to the opinion of Brophy and Blair who believe that the alveolus should be operated upon early.

The general principles underlying harelip and cleft-palate surgery are the maintenance of an adequate blood supply and the prevention of tension on the sutures and sepsis. In operations on the lip the most important points are the prevention of notching, the correction of the widening of the nostrils and the care of the premaxilla in bilateral clefts.

The author thinks that the palate should be operated upon about the eighth or ninth month and certainly before the child begins to talk.

#### REPORT OF A DEATH FROM COCAIN POISONING.—Alden, Arthur M.; Laryngoscope, 1923, xxxiii, 889.

The patient was referred to the author for submucous resection of the nasal septum following an injury to the nose which produced nasal obstruction. The general physical examination was negative with the exception of a few bad teeth. The blood pressure was normal.

The usual preoperative measures were carried out except that no morphin or other drugs were

given. The nose was thoroughly doused with a saline solution ten minutes before operation. In the operating room the patient was seated in the upright position in an operating chair. Preliminary to cocaineization, the mucosa of the septum and the lateral wall of the nose was swabbed with one application of adrenalin, 1-1000 for shrinkage. Following this the septal mucosa was anesthetized by one thorough application of cocaine, 10 per cent on a cotton wound applicator, one application being made to each side. A few moments were allowed for completion of the anesthetic action of the cocaine.

Just before the operation commenced the patient complained of pain around his heart and almost immediately went into a chronic convulsion with cessation of respiration, the convulsion lasting about one minute. He was at once lifted from the chair and placed in a prone position on an operating table. The pulse was very rapid and feeble, pupils widely dilated. Artificial respiration was started at once and camphorated oil given by hypodermic. The heart continued to beat for several minutes but all efforts to induce respiration were futile.

In order to be sure that no mistake had been made in the solutions they were removed from the anesthesia table and forwarded to the laboratory for examinations. A quantitative examination showed the cocaine solution to be 8.65 per cent cocaine. An autopsy was not permitted.

#### FIBROSARCOMA OF THE NASOPHARYNX TREATED BY OPERATION AND RADIUM.—

McPherson, D.; *Laryngoscope*, 1923, xxxiii, 653.

MacPherson reports a case of fibrosarcoma of the nasopharynx in which the swelling extended over the antrum and completely blocked the right side of the nose. The growth was within the antrum but attached to it by only fibrous trabeculae which were easily broken down by the finger. Its site of origin was the lateral wall of the pharynx and the sphenoid base. It was removed from its attachment by the anterior route of the antrum. The operator was unable to remove its base as it was very firmly attached and the operation was very bloody. The loss of blood necessitated the intravenous administration of saline solution. In the future MacPherson will tie the carotid before attempting an operation of this type.

After the operation approximately 10,000 mgm. hrs. of radium treatment was given.

One year later the author found a recurrence in the nasopharynx, but he believes that the growth will be controlled by the use of radium.

#### THE EFFECT OF BLOOD TRANSFUSION ON THE RETINITIS OF PERNICIOUS ANAEMIA.

—Goss, H. L.; *Am. J. Ophth.*, 1923, vii, 661.

The author reaches the following conclusions:

1. Transfusion does not prevent the further occurrence of haemorrhages in the retina.

2. Transfusion does not cause the retinal haemorrhages to become absorbed any more rapidly.

3. The remote effect of transfusion is a gradual lessening of the retinal oedema and a decrease in the tendency toward hemorrhage.

4. No change occurs in the retina as an immediate effect of transfusion.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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#### A REPORT OF TWENTY YEARS IN THE TREATMENT OF TUBERCULOSIS AT THE NEW MEXICO COTTAGE SANATORIUM, WITH AN ESTIMATION OF THE PART PLAYED BY CLIMATE.—E. S. Bullock and F. T. Fahlen. *The American Review of Tuberculosis*, August, 1923.

These conclusions are based on the records of 1454 cases treated at the New Mexico Cottage Sanatorium from 1900 to 1920. There has been an increasing percentage of cases unsuitable for treatment, far from home, or in other words, an increasing number of those who have failed elsewhere. The percentage of male and female patients has remained about the same as have the percentage of those giving a history of childhood exposure or delicacy and of those having fever or elevation of pulse on admission.

The unvarying characteristics of tuberculosis under given conditions is illustrated in the discharge year after year of the same percentages of bacilli free, fever free patients. In only a very small number is there a sufficient change to justify a change in the Turban classification. About half the patients have been far advanced.

The authors failed to prove as they hoped to that their results improved with experience, they decided that the only way experience could be translated into better results is by gaining better control of the patients and keeping them "on the job" longer and better.

They found tuberculin of no particular benefit, the results in treated and untreated cases being about the same. They have thoroughly demonstrated the total lack of value and probably harmful effects of all sorts of laryngeal applications. Their results show a real value in voice rest and exposure to sun rays.

Temperament and financial condition of the patients are the biggest factors, especially financial condition. A far advanced case has little hope at best and none unless these factors are favorable.

#### FURTHER OBSERVATIONS ON THE TREATMENT OF DIABETES AND TUBERCULOSIS.

—H. R. M. Landis and Elmer Funk. *The American Review of Tuberculosis*, Aug. 1923.

The association of these two diseases raises the question, should the diabetes be ignored and the tuberculosis treated, or should the diabetes be controlled and the tuberculosis ignored? Since the diabetes is practically always the initial disorder and probably always determines the course of events in most cases, it should have first consideration. Rest and fresh air which are not incompatible with strict diabetic treatment should be used at the same time. Weight increases have less significance in this class of tuberculosis patients than in others and the tuberculosis will improve if the diabetes remains under control at a given weight.

**APICAL TUBERCULOSIS.**—Orville Harry Brown. *The American Review of Tuberculosis*, April 1923.

There are a number of factors operating to effect apical tuberculosis. They all have a primary or secondary effect of injuring the apical lymphatics or impeding the lymph circulation of the area.

The relation of the lack of mobility, the narrow upper thoracic aperture, the shortened and firm first costal cartilage, the possibly ossified first cartilage, the dropping down of the sternal ends of the first ribs, the malformed vertebrae, the dwarf-like apical bronchi, the relatively overgrown apex, the gradual accumulation of dust and bacteria in the apical lymphatics all individually and collectively may play a part in helping to center the tuberculous infection in the apices.

**A BRIEF FOR INVESTMENT IN ADEQUATE PREVENTION OF TUBERCULOSIS.**—Haven Emerson, *The American Review of Tuberculosis*, Aug. 1923.

The loss of life, wealth and resources from tuberculosis is the greatest drain upon all classes of the community from any disease. The direct losses from tuberculosis can be described from the point of view of the community in terms of (1) deaths due to this disease; (2) estimated shortening of expectancy of life due to these deaths; (3) cases of prolonged total disability; and (4) loss in wealth due to (1), (2) and (3).

Using the population of New York City and basing the estimates of death, sickness and other losses upon a rate of 80 deaths per 100,000 of population per annum, we find 4,680 deaths in the City from pulmonary tuberculosis alone. It is estimated that there are at least seven times as many active cases at any time as there are deaths. At this rate we find in New York City 36,855 people suffering from active tuberculosis and needing almost constant professional direction and many also financial aid.

The estimated shortening of the duration of life is about two and a half years and one hundred dollars is considered to represent the loss in material wealth, due to the loss of a year of time by an individual. Tuberculosis is thus cutting two and a half years and \$250.00 from the life or resources of each individual. The estimated loss of wealth due to death is \$4.18 per capita of the population.

It now costs New York City an enormous sum each year to give adequate care to tuberculosis patients or \$3.15 per capita of population. Adding this to the costs of deaths, makes a cost in terms of dollars alone of \$7.96 per capita. As a matter of fact these losses are not distributed equally among all members of the community, but must be borne by the actual sufferers themselves or a charitable organization.

There has been a notable reduction in all forms of tuberculosis as seen from the fall in the death rate during the past ten years. These reductions have consistently followed intelligent effort in prevention and treatment of the disease and are not a matter of chance. This is well illustrated by the demonstration at Framingham, where during the past five years the death rate has been

reduced from 121 to 40 per 100,000 or 67 per cent, at a total cost to the community to \$2.49 per capita per annum.

In dealing with a carrier disease such as tuberculosis the results will be cumulative, resulting in an increasing relative saving in lives and costs, in proportion to the expenditure of time, effort and money in control and prevention by isolation. It is believed that if three experiments similar to the Framingham demonstration were conducted, one in New York City, one in a city of the second class and one in a village and large rural areas, the results would be such as to convince all communities of their obligation to make at least the same effort to oust tuberculosis from its position of the greatest single destroyer of life and property today.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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#### 1. PRINCIPLES OF ORTHOPEDIC SURGERY. —From Keith's "Menders of the Maimed."

John Hilton in 1862 won an enduring place in the minds and hearts of medical men when he published his lectures on "Rest and Pain." Like John Hunter, he believed in "assisting" nature. It was by means of rest that he could best help nature.

Having spent 17 years of his life in the dissecting room and gaining some fixed ideas about the relation of nerves to muscles and joints, he applied his discoveries to his surgery. "Why is an inflamed joint fixed and flexed?" he asks. His answer is that "the irritated or inflamed condition of its interior (say knee joint) involves all the articular nerves, excites a corresponding condition of irritation in the same nerve trunks which supply its extensor and flexor muscles. The flexors by reason of their superior strength compel the limb to obey them, and so force the joint into a flexed position. . . . The joint is at once rendered rigid and stiff for the purpose of keeping it at rest."

Application of splints was his chief means of securing physiological rest of joints. His service to surgery lies not in the forms of splints he recommended but in his insistence on their unremitting application. He rested the heart by confining the patient to bed, and elevated the extremities to rest their vessels.

#### 2. SACRO-ILIAC ARTHROSIS OBLITERANS.— By Edward S. Blaine, M.D. *Am. Jour. of Roentgenology*, Mch. 1923.

In a summary of 1800 cases Blaine points out 18 cases which show unusual changes in the sacroiliac joints. Symptoms enumerated are—"dull pain, soreness and stiffness of the back, with uncomfortable feeling in the lower spine," coming on gradually, progressing for several months to a year or more. Incapacity in definite movement of spine restricted. Pathology and etiology not stated except that it is an infectious osteo-arthritis.

The joint changes which he finds are that there is destructive and constructive progress, joint

cartilage is absorbed, joint is fused, and joint lime disappears.

Differential diagnosis by X-ray is made. Septic arthritis must be considered. It is usually of the hypertrophic osteo-arthritis type. It is not necessary to differentiate this from tuberculosis of the sacroiliac joint.

### 3. LOW BACK PAIN.—By R. W. Billington. South. Med. Jour., June 1923.

In his conclusions Dr. Billington points out that if one does not find consistently guarded movements, definite limited motions of lumbar spine, or persistent and consistent faulty attitude or deformity, there can be little, if any, disability due to the alleged injury or disease of the spine or sacro-iliacs.

He gives five definite causes for low back pain: (1) trauma, including strains, sprains, fractures, dislocations, etc. (2) faulty posture, with relaxed ligaments and muscles, (3) diseases of the spine and sacro-iliac joints: (4) intra abdominal and pelvic pathology: (5) skeletal malformations, defects, and deformities. Treatment is not discussed.

## GENERAL MEDICINE

Edited by Wann Langston, M. D.

State University Hospital, Oklahoma City

### THE TREATMENT OF DIABETIC COMA WITH INSULIN.—Nellis B. Foster, A. J. M. S., CLXVI-5, Nov., 1923.

The author states that until the last year he had never seen a recovery from diabetic coma. Since October, 1922, he has treated fifteen cases of coma, eight of which recovered from coma, and five still alive. These cases were treated with insulin.

He points out that acidosis is the principle condition in diabetic coma, but emphasizes both desiccation and myocardial weakness as important causes of death, that demand attention in treating coma.

As acidosis develops the patient is often nauseated and often vomits, and although the thirst is agonizing patient fears to drink. He also becomes drowsy and fails to take liquids. In the meantime urinary excretion continues unabated and pulmonary elimination of water increases. Hence the dehydration.

It has been recognized for years that fluids given intravenously in diabetic coma may cause sudden death. The fluid must be given more slowly than in other diseases. It is believed the myocardium is seriously damaged and must be protected.

The author states that there is no means of determining the amount of insulin necessary to stop the formation of ketones in an individual case. The smallest amount in his series was 70 units in a period of six hours, and the largest amount in a case that recovered was 180 units. In such critical conditions he believes the safe rule is to be sure to use enough. The first dose in adults should be 25 units and smaller amounts at intervals of an hour or two. The urine should be tested every two or three hours and large doses given as long as the urine contains large amounts of sugar. When the urinary sugar begins to fall, the insulin may be decreased and intervals lengthened.

The author reports fifteen cases illustrating varying procedures, the direct aim being to arrest ketone formations by restoring adequate oxidation of glucose; to relieve desiccation by introducing water through every avenue of absorption; and finally, to support the circulation by digitalis and caffeine.

### THE PHYSICAL FINDINGS IN PERICARDITIS WITH EFFUSION.—Roger S. Morris, M.D., and Carl F. Little, M.D., A. J. M. S., CLXVI 5, November, 1923.

The authors injected ascitic fluid into the pericardium of fresh cadavers and studied the shape of the cardio-hepatic angle, the extent of relative cardiac dullness, and cardiac shadow in radiograms. From these studies and observations on cases of pericardial effusion, they arrive at these conclusions:

1. The cardio-hepatic angle in pericardial effusion is usually an acute angle;
2. The area of relative cardiac dullness in effusion is pyriform and generally extends up to the first interspace.
3. Widening of the area of dullness and of the shadow in the first and second interspaces occur relatively early in effusion and is best determined with the patient in the recumbent position.
4. Shifting dullness has proved to be the most reliable physical sign of fluid in the pericardium.
5. Widening of the dull area and of the shadow to right and left above the diaphragm when the patient is erect is found with fluid.
6. There is an absence or marked decrease of visible pulsation in the shadow fluoroscopically in pericardial effusion.
7. Dullness at the level of the left scapula is often present with a large accumulation of fluid in the pericardium.

### THE SERUM TREATMENT OF TYPE 1 PNEUMOCOCCUS PNEUMONIA.—Frederick T. Lord, Medical Clinics of North America, Vol. 7, No. 3, Nov., 1923.

The author states that the method has not come into general use, and asks whether the time, trouble and expense are justified by results. In answer to this question he states that the evidence in favor of the method is both experimental and clinical. He cites the experiments of Cecil and Blake, in which experimental Type 1 pneumonia was induced in monkeys, five receiving serum treatment being cured and two not receiving it dying. They also found the earlier serum is given, the shorter and less severe the attack. On the clinical side he cites Cole's report of 495 cases of Type 1 pneumococcus pneumonia with 52 deaths, a mortality of 10.5 per cent. as against 181 cases untreated with a mortality of 52 or 28 per cent.

The author cites his series of 413 cases, 47 without serum treatment with a mortality of 23.4 per cent; 21 with serum treatment before the completion of the third day with a mortality of 9.5 per cent; and 45 treated with serum after the completion of the third day with a mortality of 31.1 per cent.

He stresses the importance of the use of Type 1 serum in Type 1 cases only. He believes the method is based on sound principles and that the results in his series of cases justify a continuance and wider application of the method.

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# THE JOURNAL

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### SOME HISTORY AND ETIOLOGY OF DIABETES MELLITUS\*

E. L. YEAKEL, M.D.

SHAWNEE

Diabetes mellitus is a disease of metabolism characterized (1) by a lessened capacity of the organs fixing, storing and consuming grape sugar, (2) by an excess of sugar in the blood resulting in grape sugar in the urine, and (3) by causal changes in the pancreas.

Of course, not all cases of sugar in the urine are diabetic as John<sup>1</sup> has called attention to the fact that while patients may have a high blood sugar and yet only show sugar in the urine periodically, others may have glucose in the urine but a normal glucose tolerance—the sugar being due to a permeable renal filter. So in this discussion we shall try to limit the field to the characteristic diabetes mellitus.

Diabetes is a disease attacking all races, although more frequent in the Jews and well to do classes and relatively infrequent among the Chinese and Negroes.

Men are more susceptible by a ratio of three to two. Most cases are found in the fifth and sixth decades but the highest mortality is in the young.

The question of heredity is not settled but many believe an instability of the glands of internal secretion is transmissible and often we do find several members of a family with endocrine disorders.

Celsus in the first century described diabetes but it was Aretaeus (150 A. D.) who gave us the name from the Greek words meaning, a siphon. He had noticed the thirst, diuresis and emaciation.

Galen was familiar with the sweet taste of diabetic urine and the ancient Hindoo physicians described the urine as being sweet as honey, as did Thomas Willis in 1674.

In 1776 Mathew Dobson of Liverpool, evaporated down two quarts of diabetic urine and obtained a cake of sugar weighing two

ounces, two drams, two scruples. He also noticed that the blood serum was sweet and and that the urine fermented and lost its sweet taste.

Rollo, in 1797, advocated the use of a meat diet in treatment, especially avoiding sweet vegetables. He also accepted Doctor Cullens opinion that "the cause of this disease was a fault in the assimilatory powers or in those employed in converting alimentary matters into the proper animal fluids." Fifty-two years later Claud Bernard demonstrated that in animals a puncture of a point in the floor of the fourth ventricle caused a transitory glycosuria and in 1857 Bernard discovered the glycogenic function of the liver.

In 1889 Minkowski and von Mering showed that complete extirpation of the pancreas in various animals caused a permanent diabetes and in 1900 Opie working under Welch pointed out the association between degeneration of the islands of Langerhans of the pancreas and the existence of glycosuria and described the difference between interlobular and inter-acinar pancreatitis.

Otto Cohnheim, by the results of work published in 1903 and 1904, showed that carbohydrates are probably burnt up by the interaction of the glycolytic bodies formed in the pancreas and muscles.

We shall pass over the years from 1904 to a recent date by saying that more real work on the cause of this disease has been done than in all the centuries preceding and that each investigator has added his mite towards a solution.

The glands of internal secretion have all received a great deal of attention, especially the thyroid, posterior, pituitary and adrenals in their relation to the pancreas. Friedman and Gottesman<sup>2</sup> from their work on dogs come to the conclusion that complete thyroidectomy should be tried in the diabetes of children and severe diabetes of adults, who do not respond to the modern treatment.

Lindblom<sup>3</sup> described the post-mortem findings in a boy of sixteen, in which death occurred in the sixteenth month. His conclusion being that because of reduced function of the pancreas, the pituitary and thyroid were stirred to excessive functioning, which

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

caused atrophy. The adrenals also showed signs of excessive functioning. He believes the etiology of diabetes in this case was a severe osteomyelitis three years before.

Dresel<sup>4</sup> and Beumer<sup>5</sup> have both demonstrated the influence of the adrenals, by obtaining a reduction of blood and urine sugar following exposure of the adrenals to the roentgen ray.

Thus we now believe the so-called neurogenous type of diabetes to be due to overstimulation of the adrenals through the sympathetic system. Adrenalin being an accelerator of carbohydrate metabolism and its injection capable of producing glycosuria as is the secretion of the posterior lobe of the pituitary. The work of great numbers of investigators although exhaustive in character, has given us very little that is new or definite regarding the true etiology.

The recent work of Banting, McLeod and associates so ably discussed in a recent article in the Journal of the American Medical Association<sup>6</sup> has demonstrated that the islets of Langerhans are at fault and has given us insulin, but as to the exact cause of these changes in the islets very little has been proven.

We must recognize the fact that in our present knowledge true diabetes is endocrine and that it may arise primarily from disturbance of the metabolic center or governing power that keeps these glands so nicely balanced, (as in the very young) and that secondarily it is the failure of a gland or glands constantly overworked in an attempt to keep pace with the ingestion of too much concentrated carbohydrates or glucose forming foods or worn down in their some time previous fight against infection.

If it be true that during infections the adrenals are stirred to greater activity and that the glycolytic function is thus increased to aid our body in the combat, and that a period of recuperative rest should follow but that the glands may have been overwhelmed and degeneration or atrophy be the final result, then we have the right to expect the same thing to happen to the pancreatic islets.

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## PATHOLOGICAL ANATOMY OF THE PANCREAS IN DIABETES MELLITUS\*

GEORGE O. HARTMAN, M.D.  
ENID

The pathological anatomy of diabetes mellitus is by no means clear. In many cases no gross changes are found in any of the organs which seem capable of producing the complete upset of general metabolism which is present in this disease. The blood contains an increased amount of sugar. The glycogen of the liver is absent, or nearly so. If any remains it is now found in the nuclei of the liver cells and not in the granules of the protoplasm, as normally. All the tissues of the body seem devoid of glycogen except the heart muscle, the leucocytes and the renal epithelium of the proximal convoluted tubules. Claude Bernard was able to produce glycosuria and hyperglycemia by injury to the brain. The disease sometimes seems to be associated with disturbances of the central nervous system, and lesions of the brain and spinal cord have been found in cases dying after prolonged glycosuria. However, these lesions are very variable, and in most diabetic autopsies they are not found.

The importance of the pancreas in this disease was demonstrated by Von Mering and Minkowski by animal experimentation. The extirpation of the pancreas is followed by a sweeping out of all but a trace of the glycogen of the liver, and no more can be stored in the liver, even though an excess of carbohydrate be fed. After the glycogen has disappeared the process of gluconeogenesis sets in—that is, glucose is formed from the protein of the body tissues, and the animal shows all the symptoms of acute starvation, associated with some others that may be due to the toxic action of an excess of sugar and other abnormal products, such as ketone bodies, in the blood. By observing the respiratory quotient when carbohydrates are fed to such animals, it has also been found that the tissues are unable to utilize sugar.

The acinar portion of the pancreas secretes the pancreatic juice which enters the duodenum by way of the duct of Wirsong, and aids intestinal digestion. The islands of Langerhans, however, have no direct connection with the acinar portion nor the ducts, but are isolated groups of cells with a very rich blood supply. In diabetes the lesions of the islands are of much more importance

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than those found elsewhere in the pancreas. Opie described a case of severe diabetes in which the gross appearance of the pancreas was normal, but in which practically all of the islands of Langerhans had undergone hyaline degeneration. If this were a constant finding there would be no difficulty in establishing the relation of the islands to diabetes, but there are many cases in which this universal destruction of the islands is not present. Very often there is a fine scarring of the entire organ similar to cirrhosis of the liver, and at other times no demonstrable lesions are found. Cecil, in studying a large number of diabetic cases, found pancreatic lesions in more than eighty-seven percent, in which the islands of Langerhans were always affected, while in about twelve percent only the islands were uninvolved.

Ligature of the pancreatic ducts causes an atrophy of the acini but does not affect the islands of Langerhans, and no glycosuria results. In one series of experiments half of the pancreas was thus ligated and the animal remained apparently normal. After a year the ligated portion remained as a thin transparent film. The remaining normal portion of the pancreas was removed and the animal showed a transient glycosuria which disappeared in several days. The animal could then assimilate large quantities of carbohydrates without manifesting any diabetic symptoms. After a month this atrophied portion was removed, and the animal was at once plunged into severe diabetes. Microscopic examination demonstrated that the only pancreatic cells left in this film were the islands of Langerhans.

Inflammation of the pancreas has long been considered one of the chief pathological lesions associated with diabetes, and many autopsies support this view. The usual after-results of experimental pancreatitis are various degrees of fibrosis and atrophy resembling the so-called chronic pancreatitis in human cases, although occasional instances are found in which the repair of the acinar portion is practically perfect, while the islands are extensively involved and a fatal diabetes is present. Other lesions found in the islands, and which may also be the effect of a chronic inflammatory process, are hyaline degeneration and arterio-sclerotic changes. On the other hand, cases are described in which no evidence of inflammatory change can be found. Also, pancreatitis has been demonstrated in numerous non-diabetic autopsies, sometimes much more marked than in diabetic cases, and the entire clinical evidence has been indecisive and confused.

In some severe cases of diabetes that go to autopsy there are so many normal appearing islands of Langerhans that a functional derangement must be assumed. This functional disturbance has not been reproduced experimentally in animals, and still presents a problem.

There is one important anatomic change which must be considered as a result and not as a pathological lesion producing the diabetes. This is the hydropic degeneration of the islands of Langerhans, consisting of swelling of the cells of the islands and vacuolation of the cytoplasm with the eventual loss of the cells and islands. This probably accounts for much of the loss of island tissue reported in diabetic autopsies. These changes can be produced experimentally, by feeding carbohydrates in excess of the tolerance, apparently through functional overstrain, and the permanent lowering of assimilation which has long been known to follow such over-feeding is now explained by this actual destruction of the islands. This degeneration is demonstrable in human autopsies following intense active diabetes. A point still to be explained is the different susceptibility of islands to over-stimulation; in some cases the vacuolation of the cells and corresponding decline in tolerance may be marked and rapid, while an equally severe hyperglycemia and glycosuria may be endured by other patients for many years with slight injury.

In many cases of diabetes it is difficult if not impossible to demonstrate any lesion of the pancreas, and thus it may be necessary to assume an extra-pancreatic cause, but most investigators have found changes in the islands in an overwhelming proportion of the cases. Thus, while it is not always possible to demonstrate lesions of the pancreas in cases of diabetes, they are usually found. On the other hand, the whole symptom complex can be produced by extirpation of the organ and not by any other means, although a transient glycosuria may have many other causes.

The two points of outstanding importance in the pathologic anatomy are first, the conclusive proof that diabetes is an internal secretory deficiency of the islands of Langerhans; second, the demonstration that any policy of feeding beyond the tolerance, entails progressive destruction of these vital structures.

## DISEASES OF THE LIVER\*

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MUSKOGEE

For one who looks only for the classic signs of liver and gall-bladder disease—pain, colic and jaundice—many cases will entirely escape detection and will be consigned to that unknown land of chronic dyspepsia and nervous indigestion. Long continued gastric indigestion in a patient past forty years is always more or less suggestive of gall-bladder disease, although the more we see of liver diseases the less important is the age factor and the more cases are discovered in younger individuals. The constant indigestion gas eructations with more or less vomiting at irregular intervals and constant epigastric distress are always suspicious. This epigastric distress may never reach the point of pain, but is, as frequently, more a fullness or sense of weight. Gastric analysis is of little help, as either a hyperacidity or a subacidity may be present. A very positive sign is the interference with deep inspiration when pressure is made over the gall-bladder region. With the patient flat on his back, knees flexed, firm pressure is made under the right costal arch and the patient is requested to take a deep breath. In the presence of gall-bladder inflammation even of a minor degree, the breath is stopped with a sharp catch short of full inspiration. If this is present on the right side and absent on the left this sign almost invariably points to gall-bladder or liver inflammation.

The most heralded if not the most frequent type of liver disease that is brought to our notice is that of gall stones and is usually observed in two forms—the expulsive form and the vesicular form. In the former, the stones pass into the duodenum; in the latter the stones cannot pass through the cystic duct, and therefore fall back into the gall-bladder, as a rule but not always, at times becoming fixed or lodged in the cystic duct. The symptoms of the two differ. In expulsive colic the gall-bladder is not distended. Pain is extremely violent, is of short duration and ceases suddenly. There is frequent icterus. Biliary pigments are found in the urine. Stools are clay colored from time to time. Gall stones may be found in the stools. Attacks succeed one another at rather long intervals. Enlargement of the liver and hepatalgia. In the vesicular form the gall-bladder is frequently distended. Pain is less

violent but of longer duration and does not cease so abruptly. Icterus is rare and when present is only slight. Stools are not clay colored and no biliary pigments are found in the urine. Stones are never found in the stools. Attacks succeed one another at short intervals and uninterruptedly. Liver is of normal size and not painful to pressure.

Another form of liver disease is one that for want of a better name may be termed migraine or neuralgia of the liver. The diagnosis of this form of neuralgic pain in the stomach and liver is not always easy, as it closely resembles gall-stone colic. However, in cases of supposed gall-stone colic where there are not positive objective symptoms such as swelling, passing of stones, recurring icterus and fever, duodenum pulled to right in Roentgen picture, abdominal migraine must be thought of, and inquiries should be made along that line, especially in the case of women. It frequently happens that such migraine pains occur after gall-stone operations have been performed. Laparotomy has often been repeated in such cases and nothing abnormal found. The origin of migraine probably lies in disturbance of the fat metabolism.

All diseases of the liver may be summed up as being due to an alteration of its secretion whether of quantity or quality. It should be remembered that it is quite possible that the liver also performs endocrine functions in addition to its other physiologic activities. It appears from our present knowledge as to the formation of gall-stones that there is but one proved theory and that is *Stasis of the bile*. It is also interesting to note that probably as much uric acid is excreted by the liver as through the kidneys, and that there is always an insufficiency of the liver, confirmed by functional test, in melancholia.

Therefore a physiologically active liver is necessary for a normal bile, one which is sufficient in quantity and sufficiently fluid in consistency to flow freely and containing a normal percentage of bile acids. Before attempting the treatment of liver diseases it is absolutely essential to rule out epigastric hernia; duodenal and gastric ulcer; pelvic lesions in women, and *empirically syphilis, acquired and congenital*.

The treatment of liver diseases almost up to the present has been surgical with more or less success—mostly less. The removal of stones from the biliary apparatus, like removal of the thyroid gland, merely removes the manifestation of the disease not its cause.

The surgical drainage of the gall-bladder is inadequate in that it can only be maintained for a limited period of time.

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The removal of the gall-bladder quoting an authority (F. W. Parham). Instead of saying that the gall-bladder should always be removed, except when contraindicated by the operative risk, I desire to reverse the formula and say the gall bladder should only be removed on account of definite crippling pathology which will preclude restoration to useful function, for the removal of the gall bladder changes physiological relations, which should never be done without adequate reason.

In conclusion, after an experience covering the past four years, I am convinced that the duodenal drainage of the biliary apparatus and the use of proper medicaments introduced into the duodenum has much to offer toward a cure for this class of diseases.

References other than quoted in the text: T. Brugsch and J. Rother, Aubel, Ransohoff, Langle, and Kelling.

#### A POINT IN THE CONSTITUTIONAL TREATMENT OF DELAYED RECOVERY OF OPEN FRACTURES\*

FRED S. CLINTON, M.D., F.A.C.S.  
TULSA

The progress toward recovery in open fractures sometimes seems to be arrested without any apparent or assignable cause. Adequate reduction, retention and effort at restoration having been employed yet healing of bone and soft parts fails to reward the patient and physician.

In cases of delayed or non union, or where there remains an outside wound requiring dressings longer than usual, after diligent effort to exclude the general causes such as syphilis, alcoholism, nephritis, diabetes, etc., or local causes such as improper reduction and imperfect immobilization or intervention of muscle, fascia, or detached bone or other foreign body, or involvement of blood vessels or nerves, or presence of undrained area or infection, assuming that patient has had proper food and care, yet healing does not take place, one must look elsewhere for aid. In such cases it has been the writer's experience for many years to use Iodide of Potash beginning with ten drop doses of saturated solution three times daily with beneficial results even though no luetic condition was demonstrable. The dose may be increased as indicated.

It must be understood that this does not supplant all indicated mechanical measures

for relief such as massage, rubbing ends of bone together, hyperemia or other operative measures.

#### INTERNAL PODALIC VERSION: PERSONAL EXPERIENCE WITH THE POTTER METHOD\*

LEE DORSETT, M.D., F.A.C.S.  
ST. LOUIS, MO.

It is with sincere pleasure that I appear before you today and I wish to take this opportunity to thank this society for its kind invitation to address you on a subject that has interested me greatly for the past three years.

The Potter version has created considerable stir in the obstetrical world and has been lauded and condemned by numerous writers. The method when put into practice has been the means of saving the lives of many babies and I regret to say has been the instrument in the hands of the unqualified for the death of some babies.

Internal podalic version is not a new method of delivery, neither is Potter's technique new. What Dr. Potter has done is to pick certain steps from the technique of others and combine them in a method of his own.

Potter believes in the delivery of all women in labor by version. I agree with him when it comes to his own work; any man who delivers, himself, 1200 to 1400 women a year, must use a rapid method of delivery. Potter can do this delivery most successfully, but to say that every one who practices obstetrics can do this will be fatal to a large number of babies.

What I want to say is this; that when a physician wishes to perform version he should follow Potter technique. As far as the indication for version, that remains to the good judgment of the operator. I have seen Potter work, and since coming home from his clinic have done a considerable number of versions, and from my own personal experience I am going to give you what I have learned.

First I will mention what I consider contraindications.

1. A generally contracted pelvis.
2. A rachitic pelvis.
3. A contraction ring of the uterus.
4. A non-effaced (not fully dilated) cervix.
5. A hydro-cephalic fetus.
6. An abnormally large fetus.

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\*Read before Section on Pediatrics and Obstetrics, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

7. A disproportion between fetus and pelvis.

Personally, I feel that the following are within the conservative range as far as the indication for this operation is concerned.

1. Persistent occiput posterior.
2. Prolapsed cord.
3. A protracted labor where other conditions are normal.
4. In cases of anti-partum hemorrhage.
5. Transverse presentation.
6. Where high forceps would be used.

In regard to the operation I want to emphasize several points. The administration of the anesthetic is one of the most important factors in a successful version. We use chloroform exclusively for the reason that a patient is anesthetized with less drug, the baby for this reason receives less, the patient goes under more quickly and awakens more quickly. When the child has been turned and it has been extracted as far as the buttocks the anesthetic is stopped; the patient begins to awaken, the uterus begins to contract, and thus flexion of the baby's head is increased.

The position on the table is important, as is the emptying of the bladder and the ironing out of the vagina.

As a word of warning I wish to say that a version should never be attempted until the patient is thoroughly anesthetized and the cervix is completely dilated. In my hands the manual or instrumental dilatation of the cervix followed by version and extraction has not been very successful. I have lost two babies in eclamptic cases where I was unduly hasty.

#### TECHNIQUE

1. The patient is placed on as high a table as is obtainable and anesthetized with chloroform.

2. The patient is then drawn down on the table until the buttocks are just over the edge of the table (in a modified Walcher position), the feet are lowered and are either held by two assistants or placed on two chairs. The vulva, perineum and adjacent parts are washed with soap and lysol solution or bichloride. The bladder is completely emptied.

3. The hand (preferably the left) is introduced into the vagina, and a goodly amount of liquid soap is poured into the vagina over the depressed perineum. The vagina is then dilated by a process of "ironing out"; this consist of a downward motion of the hand over the vaginal floor, palm down, beginning posteriorly and drawing forward. This process should take from five to ten minutes.

4. After the vagina is well relaxed, the hand and arm of the operator (long rubber gloves should be worn) is well lubricated with soap. The hand in the form of a cone then enters the os and if it is not fully dilated, it is gradually stretched. Then hand and arm enter the uterine cavity pushing the head into the iliac fossæ, and passing upward. If the membranes are unruptured they are gently separated from the uterine wall, as the hand moves up into the uterus. At this point care should be used to avoid the placenta. When the feet are located, the hand is forced through the membranes (high up) and both feet are grasped. (It is absolutely essential that the foot be differentiated from a hand and this is easily done by the feel of the heel.) By steady traction downward on the feet and, if necessary, an upward pressure of the other hand of the operator on the abdomen of the woman, forcing upward and outward the fetal head, the feet are delivered, and when they are out of the vagina as far as the knees, the turning of the child is completed. With gentle traction, the hands being over the pelvis of the child, the trunk is delivered, the back of the child being always upward, it now lies transversely to the pelvic outlet. The whole process should be done with great deliberation, as up to this point there is absolutely no need of haste. When the trunk is delivered, the anesthetic should be stopped, so as to allow the uterus to contract, and thus aid in the flexion of the head. When the trunk is exposed, it should be wrapped in a warm, sterile towel to prevent stimulation and thus cause the child to gasp and aspirate any fluids.

6. With the body of the child in this position, it is given a half turn (the direction depending upon which diameter the head enters the pelvis) and the body drawn downward and backward until the edge of the scapula is under symphysis. The anterior shoulder is then delivered, the body rotated again until the posterior shoulder is anterior, and this is then delivered.

7. With the child astride the palm surface of the forearm, one or two fingers are introduced into the mouth and gentle traction made to flex the head. With slight pressure with the operator's other hand over the occiput of the child through the mother's abdominal wall flexion is promoted and the head slowly delivered until the mouth is out of the vagina; at this point the child is held and any mucus "milked" from the trachea, and the perineum allowed to dilate. There is no haste now, as the child generally gasps spontaneously. When the mucus is freed

from the trachea, the further delivery of the head is proceeded with. The child is then laid over the abdomen of its mother and will in a minute or two begin to breathe spontaneously. When the cord ceases to pulsate, it is cut, and 1 cc. of pituitrin is given before the placenta is delivered.

At no time during the delivery is any attention paid to the cord. It is often prolapsed but does not interfere with the delivery, nor is there any danger of it.

In conclusion I wish to say that it has been my experience that cases delivered by version show little, if any, post-partum complications, and there are less perineal lacerations and less injury to the baby.

*Discussion:* Dr. W. W. Wells, Oklahoma City.

We are certainly lucky to have a man like Dr. Dorsett to visit us and to give a paper and lantern slides on one of the most important obstetrical operations, that of internal version.

I am glad to know that Dr. Dorsett does not do a version as a routine delivery. I believe we are all finding more indication for version than we did before Potter gave us this new version.

The one thing that worries me most is the disproportion, it certainly is a very serious affair to find after you have done a version, to find after you have a disproportion that it is almost impossible to deliver the head.

I think Dr. Potter recognizes these conditions and does not attempt to do a version, but does a cesarean section, that is the reason he does more cesarean section than the average obstetrician.

Now in doing a version there is one maneuver that I wish to emphasize, and that is we must get the head well out of the inlet and up in the left iliac fossæ before we attempt to pull down on the feet. It will make the version easier. This is done by the right hand on the abdomen pushing the head upward and outward.

#### THE INSUFFLATION TEST AS A DIAGNOSTIC AND THERAPEUTIC AGENT IN STERILITY\*

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TULSA

Sterility in the absence of clinically demonstrable pathologic conditions of the pelvis is most common. Until Dr. Rubin of New York City introduced his technique for

demonstrating the patency or non-patency of the Fallopian tubes, one of the most common cause of sterility passed unrecognized and women frequently submitted to all kinds of operative procedure, that with this new adjunct to diagnostic procedure, we now know to have been useless.

To briefly summarize the technique of the test: The apparatus consists of a carbon dioxide tank, fitted with a reducing valve to limit the pressure of the outflowing gas. This is connected by rubber tubing to a volumeter, (an instrument which measures the volume of gas passing through it); which in turn is connected to a Manometer, to give an index as to the pressure of the gas and then to the uterine catheter with which the gas is introduced into the uterine cavity. The catheter is fitted with a soft rubber urethral tip; which when pressed snugly against the cervix forms an air tight joint, preventing any escape at the external os.

In performing the test, the patient in the dorsal position, a bivalve speculum is introduced and the cervix, previously painted with iodine, is grasped with a vulsellum forcep. The catheter is now introduced into the uterus, beyond the internal os, and by steady traction on the vulsellum, close coaption is made between the cervix and urethral tip of the catheter. At first, an antiseptic solution of some kind was used in the vagina, covering the junction of the catheter and cervix to show by air bubbles whether any leak occurred. This, however, has been found unnecessary, as, by proper traction on the vulsellum the close contact between the cervix and soft rubber urethral tip makes an air tight joint. Moreover, any escaping gas is readily detected by a characteristic whistling noise made as it leaves the cervical orifice.

The gas is now turned on, being allowed to flow in, as determined by the Volumeter at the rate of 40 c.c. in approximately 20 seconds. Usually in the patent tube cases the pressure rises to 100 or 150 dropping suddenly to 60 or 80. It is advisable not to employ a pressure greater than 200; in non-patent cases; nor to allow more than 120 c.c. of gas to penetrate the abdomen in the patent cases.

In Dr. Rubin's original technique, immediately after the insufflation, Fluoroscopy was done to determine the presence of the gas in the abdominal cavity. It has, however, been found by other investigators that all patients, in whom the gas has penetrated the abdomen, suffer almost immediately, or at most, within a short time after rising from the table, of a characteristic pain in the right shoulder. This is deemed sufficient proof that the tubes are patent and that the gas

\*Read before Section on Surgery and Gynecology, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

has penetrated the abdomen. The gas is quickly absorbed and the pain rapidly disappears in the majority of cases. Having the patient assume the recumbent position for awhile favors its disappearance.

I have used the test in a series of fifteen cases, coming to me because of sterility. In all of these cases the husband's semen had been examined and in all but two cases were lively viable spermatozoa found.

Out of the fifteen cases, six with normal histories and no demonstrable pelvic lesions, showed closed tubes, that resisted several attempts at insufflation at a pressure of 200 and that were an absolute bar to conception. It is interesting to note that four of these women had had one or more operations; repeated dilations, curettages, etc.; in attempts to relieve the sterility. In seven cases, two of whom had husbands showing non motile spermatozoa, the gas went in at pressures ranging from 50 to 120 mm. One of these patients had an acute ante-flexion of the uterus. Another had an infantile uterus. Two showed retroversions. One with a history of amenorrhea lasting over a period of several years, showed large cystic ovaries.

This case was operated, one large cystic ovary removed, and some cysts on the other punctured. She was placed on ovarian extract, menstruated one month after the operation and her periods since that time have been regular.

In one of these cases, giving a normal menstrual history, married six years without becoming pregnant, the pelvic organs were found normal. The gas was introduced and allowed to reach a pressure of 200; not going through, it was released. At the second attempt the pressure rose to 180, then suddenly dropped to 130, then to 100. The patient complained of severe pain in the left side. One hundred and twenty c.c. of gas were allowed to flow. On rising from the table, she had the typical shoulder pain. She missed her next period, and a recent examination reveals a four months' pregnancy.

In still another case, a woman married nine years, the pressure rose to 200, dropping to 140 on the second attempt, the gas at the third attempt going through at 110. She had the typical shoulder pain. To date this case has shown no signs of becoming pregnant.

In none of these cases have there been any untoward or disagreeable symptoms, other than the shoulder pain; and abdominal pain in one case, which, in all cases disappeared within a few hours at the most.

#### CONCLUSIONS:

That the Rubin insufflation test is a valuable adjunct in the diagnosis and treatment

of sterility, due to tubal closure.

Operations for relief of sterility are not justifiable without a preliminary tubal patency test.

The contra-indications to the test, are marked endocervicitis, endometritis, vaginal or pelvic infections. It should not be done near the menstrual dates.

The husband's semen should be examined in all cases of sterility.

The technique of the test is simple; practically painless, and no assistance is required.

In this small series of cases, over 50 per cent showed closed tubes, an absolute bar to conception; and a relief of this condition in two cases.

At least three attempts at introduction of gas should be made before it is definitely decided that the tubes are closed.

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#### PROCEEDINGS OF THE UNIVERSITY CLINICAL SOCIETY

OKLAHOMA CITY, OKLA.  
NOVEMBER 23, 1923

DR. A. L. GUTHRIE: 1. A Case of Orbital Abscess. 2. A Case of Bezold's Mastoiditis. 3. A Case of Stricture of the Esophagus.

1. *Case of Orbital Abscess:* Patient came to the hospital on November 6th with the following history: Two weeks before entering hospital she had acute coryza accompanied by a furuncle in the left nostril. No particular attention was paid to the cold or boil at this time and they subsided without any apparent complications. One week before admission she complained of severe pain about the left eye and temporal region. Two days later eyelids became swollen and very tender. The following day patient noticed that eyeball protruded and she was blind in that eye. The pain continued and the swelling progressed until she entered the hospital. Physical examination upon admission: Temp. 102. Pulse 92. W. B. C. 11,800. The right eye was normal. There was marked swelling, redness and tenderness about the left eye and frontal region. Marked exophthalmus. The eyeball was pushed outward, downward and forward. Pupil slightly dilated and reacting sluggishly to light. Marked limitation of movement of eyeball but not paralysis of the extraocular muscles. Fundus slightly congested; veins

engorged and arteries constricted, but there was no distinct choked disc. The admitting physician made a tentative diagnosis of thrombosis of the cavernous sinus which was ruled out for lack of symptoms referable to this region, viz., paralysis of the third, fourth, ophthalmic branch of the fifth, or sixth cranial nerves or any symptom referable to the other eye. A diagnosis of orbital abscess probably of ethmoidal and frontal origin was made. Radiograms substantiated the diagnosis of ethmoidal infection, with a possible involvement of the frontal sinus. On account of a heart complication the left ethmoidal sinuses were opened under local anaesthetic and drained both externally and intranasally. There was immediate relief from pain and the eyeball receded to a considerable extent. A second radiogram taken on the 9th showed a more distinct involvement of the frontal sinus than the previous picture so we decided to open this sinus externally. This was done under local anaesthetic and a great quantity of pus found. Following the second operation there was complete relief from pain and a further reduction of the exophthalmus. (Subsequent note: External wound completely closed and drainage into nose practically stopped. No appreciable return of vision. December 12, 1923).

2. *Case of Bezold's Mastoiditis*: This case is shown as a not infrequent type of pathology. Patient age 18 with a history of purulent discharge from each ear for the past ten years. An occasional ear ache but never any pain or swelling behind the ear previous to November 3, 1923, when a slight swelling developed low down behind the left ear accompanied by pain and tenderness. The discharge from left ear had stopped a few days previous to the onset of pain and swelling. Upon admission to the hospital readings were as follow: Temperature 101. Pulse 90. WBC normal. A diagnosis of chronic mastoiditis with an acute exacerbation was made. There was no tenderness over the mastoid antrum, no sagging of the posterior-superior wall of the external auditory canal nor any bulging of the tympanic membrane. The pathological process had gradually extended downward and inward from the mastoid antrum involving one mastoid cell after another reaching the surface on the inner aspect of the mastoid tip, in the digastric fossa, from whence it continued to spread into the soft tissues. This type is known as Bezold's Mastoid. The classical mastoid operation was performed and the above pathological diagnosis substantiated. These cases do not recover with expectant treatment and are distinct types for immediate and thorough operation.

3. *Case of Stricture of the Esophagus*. Child two years of age was brought to the hospital with a history of having swallowed lye some six weeks previous. Upon admission was not able to take even liquids and was markedly emaciated. Esophagus was inspected with esophagoscope and a rather firm stricture encountered just below the pharyngeal opening. A small bougie was passed and the child was able to take a small quantity of milk. A gradual dilation was instituted daily until at present solid food can be taken. The parents will be instructed that the stricture will have to be dilated frequently for the next year and then less frequently for several years and possibly the remainder of her life.

DISCUSSION (abstracted). DR. H. C. TODD: The cases of orbital abscess are very interesting and sometimes develop quite rapidly. I have seen three cases of orbital abscesses. A large percent of these cases are due, I believe, to a breaking through of an ethmoid infection into the orbit. The pain in these cases is often not a marked symptom.

The case of esophageal stricture is of great interest. These cases present very important phases for consideration. They are especially interesting to me, because in my hands the treatment for permanent cure has been so hopeless. If successful in passing the bougie through the stricture and the esophagus is sufficiently dilated the child may continue in a good condition for a certain period. The parents should be urged to have the bougie passed at frequent intervals, and not wait for further manifestations of the extreme symptoms before doing so. This will give the only assurance of safety to the life of the child.

DR. L. M. WESTFALL: *A Case of Bullet Wound of the Right Eye*. J. W., admitted to the hospital 11-7-23 4 p. m. Accident had occurred that morning. Examination showed upper and lower lids very much swollen and discolored, separated with difficulty. Swelling extended over right temporal region. A small opening was seen in skin above, in line with posterior margin of external auditory meatus, and in line with upper ear margin. Wound in cornea slightly external and below center. Part of lens and vitreous presenting. Vision of course destroyed. Boy was very drowsy; when aroused would reply to questions as if very sleepy. Older brother who brought boy to hospital stated that the boy had been very drowsy since accident. Temperature 99; pulse 86.

The scalp wound suggested the probability of the bullet's exit which was confirmed by radiographs the following morning. Small particles of lead, however, were retained.

Radiograph did not indicate course or exit point of bullet. As the eye was destroyed its immediate removal was imperative.

The following morning the patient's general condition was slightly improved and enucleation was done under ether. When first seen, the important question was whether or not the bullet had penetrated the cranial cavity. Eye on removal showed bullet had emerged from eye about one-fourth inch external to optic nerve. My belief is that bullet entered from left angle at a time when eyes were turned to left; the bullet emerging in temporal fossa passing backward under skin for a short distance. The stupor on admission is accounted for as shock and a slight concussion.

The mental condition cleared in about 24 hours. There was swelling in front of the ear for about two weeks which gradually receded. There was never any pain over this even on pressure.

#### DR. LUTHER EMMETT HOLT

Dr. L. Emmett Holt, who died in Peking, China, on January 14, 1924, will perhaps be longest remembered as the author of a book, "The Care and Feeding of Children," which, through twelve editions, has been for twenty-five years an authority in the homes, not only of the United States, but of South America and Europe, and in China and Japan, where it has been invaluable in medical missionary work.

Recognized as a physician of the highest rank and standards, his influence with his profession was invaluable in removing doubts concerning the value of popularizing health education. After the Child Health Organization program had grown up under his stimulating leadership, he enthusiastically joined with several directors of the American Child Hygiene Association, of which he had formerly been president, in bringing about an actual consolidation of these two great organizations in the American CHILD HEALTH Association, of which Secretary Herbert Hoover is the president, and of which Dr. Holt served as First Vice-President from its beginning.

Dr. Holt was born on March 4, 1855, at Webster, N. Y., was graduated from the University of Rochester in 1875, took his master's degree three years later, and, in 1880, was graduated from the College of Physicians and Surgeons of Columbia University. Later, when his work had brought him fame, he received the honorary degrees of LL.D. from Rochester, and Sc.D. from Columbia and Brown Universities.

Dr. Holt's activities covered a wide field, but were devoted to a single interest. From 1890 to 1901, he was Professor of the Diseases of Children at New York Polyclinic, and from 1901, he was Professor of the Diseases of Children at the College of Physicians and Surgeons. At the time of his death, he was physician-in-chief at the Babies' Hospital, member of the Board of Directors and Secretary for the Rockefeller Institute for Medical Research, and Trustee of the University of Rochester. He was a member of the Association of

American Physicians, retiring president of the American Pediatric Society, and a trustee of the New York Academy of Medicine.

He conducted important research on infant metabolism and was the author of a number of pediatrics papers. His book on "The Diseases of Infancy and Childhood" has been the standard text book in pediatrics in the medical schools of the country.

Though nearly seventy years old, he went to China in August, 1923, as special lecturer at the Union Medical College in Peking, an institution maintained by the Rockefeller Foundation. His death is a loss, not only to the nation, but to the world, whose children he made it his mission to save and serve.

#### THE OCULIST

Owing to the fact that ethical physicians do not advertise, the general public frequently does not realize the difference between the **oculist** and the **advertising eye specialist**, and very often has its eyes examined by the latter, believing that it is receiving the services and attention of a **physician**.

The Word "Doctor" or the prefix "Dr." does not always mean a "Doctor of Medicine," but the letters "M. D." at the end of the same signifies physician, "Doctor of Medicine."

The **oculist** is a physician, a specialist in the diagnosing and treating diseases of the eye and the correcting of abnormal conditions of the refractive media of the eye by scientific examinations and the prescribing of the proper correcting lenses.

As many serious organic disturbances make their first appearance in the eye, the **oculist**, because of his knowledge of the practice of medicine, is the first to recognize the diseased condition that may exist and both under the law and by his knowledge is in a position to consult with your attending physician, if necessary; it is manifest therefore that the interest of the patient can best be served by the **oculist**.

While poor vision is not in all cases due to a pathological condition, very frequently the vision may be improved by the use of lenses and a pathological or diseased condition entirely overlooked.

A common practice, due to a lack of knowledge, is to give concave glasses when either no glasses or convex ones are needed. The effect of concave lenses is to make objects appear blacker and more distinct, so that the patient thinks his vision is improved, but the net result is eye strain, with its symptoms of headaches, sleepiness, etc.

It is without question, therefore, that the safest and most reliable way is to first consult an oculist, feeling certain that if glasses are needed they will be prescribed and in case they are not, you will be frankly informed and such advice given as may be necessary.

#### The Optician

A mechanical workman experienced in the grinding of lenses, the assembling and manufacturing of frames and mountings.

The dispensing optician is one who has had extensive experience as a mechanical optician and who is qualified to accurately adjust, take measurements and fit correctly frames or mountings to the patient after the oculist has made the examination for any refractive errors. The Optician is not qualified to do refractive work and should not be confused with the Oculist.

# THE JOURNAL

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Local news of possible interest to the medical profession,  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
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matter of fair reciprocity.

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### EDITORIAL

#### SCIENTIFIC SEARCHLIGHTS ON THE ABRAMS MACHINE

On the theory that "every knock is a boost" THE JOURNAL often hesitates to condemn or comment upon many factors supposedly connected with medicine for the very good reason that it will be almost surely misunderstood by the layman. In the first place our columns only reach the physician and many of our members are not aware of their contents. This is evidenced by the many inquiries as to the next meeting place, the names of some official, whose name is often printed monthly in the JOURNAL and sim-

ilar unnecessary requests. In one thing, how-  
ever, proper propaganda has been taken en-  
tirely away from our profession and, we are  
glad to say lodged by and with undisputed  
and unbiased authority and in such manner  
and means as will unquestionably do the most  
possible good. We allude in this instance  
specifically to the merits or lack of merit of  
the so called Abrams ossiloclasts. Mr. Ford's  
*Dearborn Independent*, *Hearst's International*  
and lastly *The Scientific American* have un-  
dertaken investigations of these farces and  
placed them before the general public. The  
articles are prepared, not by physicians,  
whose motives and findings, regardless of  
their honesty and correctness would most  
surely be charged with unfairness, but by the  
most technical electrical authorities. These  
findings, not yet completed by the *Scientific  
American*, all indicate there is absolutely no  
basis for the claims of those who rushed into  
the advertising pages of our dailies with their  
"blood will tell" appeals to the ever gullible  
and very ignorant public. *The Dearborn In-  
dependent*, that is their skilled, trained ob-  
servers fail to find anything meriting the  
claims of these vultures, exposing the whole  
thing to the open scorn and question of all  
honest men. We have only one observation  
to make in this connection. So far as we are  
aware no physician entitled to any claim ex-  
cept to that of inefficiency, unpreparedness  
to grapple with any scientific matter and a  
low order of mediocrity has undertaken to  
foist this last outrage upon the public. The  
very class of sponsors of this "great discov-  
ery" should have at once branded it with the  
gravest question marks.

#### ANNUAL MEETING AT OKLAHOMA CITY

Upon advices that the city of Ardmore felt  
unable to care for the Annual Meeting of the  
State Association in May, the Council select-  
ed Oklahoma City as the meeting place,  
after the Executive Committee of the Okla-  
homa County Medical Society was apprized  
of the situation and extended invitation to  
meet in the Capitol City. This change is re-  
grettable insofar as the great inconvenience  
caused by the lateness of Ardmore's decision.  
Many firms and visitors had made plans  
based upon that place and a different date,  
all of which must be necessarily revised.  
Oklahoma City, however, is the city of all  
ours where meetings are always successful as  
they can be, where their clinics are unusually  
interesting and helpful and where there is less  
complaint as to many difficult details sur-

rounding arrangements than is had from any other place.

Several years ago it was attempted to select the three largest cities in the State for meeting places, but the matter was defeated in the House of Delegates. This action was taken in a city where only two days of a three day program were used and where there was a great deal of dissatisfaction. It is to be hoped that hereafter the matter of selection of the annual meeting place to be given due consideration from the standpoint of availability, convenience of access, accommodations, and above all things unquestioned ability on the part of the local profession to care for such an affair.

Now, therefore, our members may write the date in their minds as May 13, 14, 15, 1924.

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### *Editorial Notes—Personal and General*

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DR. A. J. WEEDN, Duncan, is installing hospital facilities at Waurika, in addition to those he has at Duncan and Marlow.

DR. J. ARTHUR MULLINS, Marlow, has been appointed local physician for the Rock Island Railroad.

DR. H. O. GOWEY, Newkirk, was summoned to the bedside of his mother at Pleasant Plains, Iowa, who was very sick and not expected to live.

DR. V. C. TISDAL, Elk City, is planning to build a new hospital, 48x100 feet, modern in every respect, capable of taking care of 75 patients.

DRS. WILLIAM DAVIDSON and H. C. MAN-  
NING, Cushing, are sporting a fine new suite of offices in the First National Bank Building.

DR. J. C. WATKINS and family, Checotah, are motoring to Harlingen, Texas, where they will make their future home, Dr. Watkins having been at Checotah for eleven years.

CUSTER COUNTY MEDICAL SOCIETY has as new officers for 1924: Dr. W. I. Basinger, Butler, President, and Dr. C. H. McBurney, Clinton, Secretary-Treasurer.

DR. T. M. BOYD, Norman, who has been associated with the Central State Hospital, is now in Brownsville, Texas, being forced to go there due to the condition of his health.

MCCURTAIN COUNTY MEDICAL SOCIETY at its last meeting elected Dr. A. S. Graydon, Idabel, President, and Dr. R. H. Sherrill, Broken Bow, Secretary-Treasurer.

STEPHENS COUNTY MEDICAL SOCIETY officers for 1924: Dr. J. B. Carmichael, Duncan, President; Dr. J. W. Nieweg, Duncan, Secretary-Treasurer.

DR. E. L. INMAN, Eakley, has removed to Apache.

DR. C. O. GOSE, Hennessey, is visiting in California.

DR. P. B. MYERS, Apache, is attending the Northwestern University at Chicago.

DR. M. SHADID, Mangum, has removed to Elk City.

DR. B. T. BITTING, Enid, has located at Arapaho.

DR. J. H. KAY, Durant, has moved to Holdenville.

DR. J. A. MARTIN, Cushing, was a visitor at Rochester, Minnesota, last month.

DR. G. A. BOYLE, Enid, who was operated upon recently, is reported better.

DR. RURIC N. SMITH, Tulsa, and Miss Ruth Alice Ward of Ardmore, were married on January 15, 1924.

DR. CARL PUCKETT, Pryor, has been appointed State Commissioner of Health, over a large field of aspirants.

DR. W. S. IVY, Duncan, was called to Mississippi recently on account of the death of his father.

DR. A. S. NUCKOLLS, Ponca City, was elected head of the Ponca City Hospital staff at the annual meeting December 24.

DR. and MRS. B. F. STAYER, Bartlesville, returned from Kansas City where they were called on account of the illness of Dr. Stave's mother.

DR. HENRY S. BROWNE, Tulsa, and Miss Dorothy Malone of St. Louis, Missouri, were married at the Holy Family Catholic Church, Tulsa, on December 31, 1923.

DR. W. P. LONGMIRE, Sapulpa, spent his first vacation in 20 years with his parents in Anderson County, Tennessee, during the Christmas holidays, accompanied by his daughter.

ADAIR COUNTY MEDICAL SOCIETY new officers; Dr. Dorsey P. Chambers, Stilwell, President; Dr. Robert M. Church, Stilwell, Secretary-Treasurer.

JEFFERSON COUNTY MEDICAL SOCIETY has elected the following for 1924: Dr. M. L. Hutchison, Ryan, President; Dr. J. W. Watson, Ryan, Secretary-Treasurer.

CADDO COUNTY MEDICAL SOCIETY officers for 1924: Dr. C. N. Meador, Anadarko, President; Dr. E. L. Inman, Apache, Vice President; and Dr. Charles R. Hume, Anadarko, Secretary-Treasurer.

TEXAS COUNTY MEDICAL SOCIETY on January 9th, elected the following for its 1924 officers: Dr. William H. Langston, Guymon, President, and Dr. R. B. Hayes, Guymon, Secretary.

THE COOPER CLINIC, Fort Smith, announces the removal of its offices and laboratories from the First National Bank Building, to the Cooper Clinic Building, Little Rock Avenue and Thirteenth Street.

COMANCHE COUNTY MEDICAL SOCIETY elected new officers for 1924. Dr. W. J. Mason, Lawton, President; Dr. L. C. Knee, Lawton, Vice President, and Dr. Thos. R. Lutner, Lawton, Secretary-Treasurer.

DR. CARY W. TOWNSEND, Oklahoma City, City Health Commissioner, filed the first birth registration in Oklahoma City, for 1924, it being the record of the birth of his son, Cary Louis Townsend.

WASHITA COUNTY MEDICAL SOCIETY elected 1924 officers as follows: Dr. E. F. Stevens, Foss, President; Dr. A. M. Sherburne, Cordell, Vice President; Dr. B. W. Baker, Cordell, Secretary-Treasurer and Delegate, and Dr. A. S. Neal, Cordell, Alternate.

MURRAY COUNTY MEDICAL SOCIETY has the following new officers for 1924: Dr. J. T. Wharton, Sulphur, President; Dr. Howson C. Bailey, Sulphur, Secretary-Treasurer; Drs. George Slover, W. H. Powell and J. H. Simmons, all of Sulphur, Censors.

OKLAHOMA COUNTY MEDICAL ASSOCIATION has selected the following for 1924 officers: Dr. William H. Bailey, Oklahoma City, President; Dr. W. A. Lackey, Oklahoma City, Vice President; Dr. E. Lee Jones, Oklahoma City, Secretary-Treasurer; Drs. R. M. Howard, W. K. West and R. S. Love, Censors.

BRYAN COUNTY MEDICAL SOCIETY at its annual election selected the following to serve for 1924: Dr. C. F. Taliaferro, Bennington, President; Dr. H. B. McKinney, Durant, Vice President; Dr. John A. Haynie, Durant, Secretary-Treasurer; Dr. H. B. Fuston, Bokchito, Censor, and Dr. James L. Shuler, Durant, Delegate.

OKMULGEE COUNTY MEDICAL SOCIETY elected as new officers for 1924: Dr. J. L. Miner, Beggs, President; Dr. J. H. Neal, Beggs, Vice President; Dr. W. W. Stark, Okmulgee, Secretary-Treasurer; Drs. W. M. Cott, Okmulgee, V. Wallace, Morris, and W. C. Vernon, Okmulgee, Censors.

TILLMAN COUNTY MEDICAL SOCIETY elected the following new officers for 1924: Dr. C. Curtis Allen, Hollister, President; Dr. J. C. Reynolds, Frederick, Vice President; Dr. J. Angus Gillis, Frederick, Secretary-Treasurer; Drs. M. M. MacKeller, Loveland, and O. G. Bacon, Frederick, Delegate and Alternate; Drs. Harper Wright, R. E. Wilson, and J. C. Reynolds, Censors.

WOODWARD COUNTY MEDICAL SOCIETY at a regular meeting on December 5th, elected the following officers for 1924: Dr. C. J. Forney, Woodward, President; Dr. T. C. Leachman, Woodward, Vice President; Dr. C. W. Tedrowe, Woodward, Secretary-Treasurer; Drs. C. E. Williams and J. L. Patterson, Woodward, Censors; and Dr. J. L. Patterson, Woodward, Delegate; Dr. C. E. Williams, Woodward, Alternate.

NOWATA COUNTY MEDICAL SOCIETY met in regular session December 6 and the following officers were elected: Dr. J. P. Sudderth, Nowata, President; Dr. John R. Collins, Nowata, Secretary-Treasurer.

LEFLORE COUNTY MEDICAL SOCIETY met December 20 and elected for its 1924 officers: Dr. Harrell Hardy, Poteau, President; Dr. G. R. Booth, Leflore, Vice President; and Dr. Earl Woodson, Poteau, Secretary-Treasurer.

CHEROKEE COUNTY MEDICAL SOCIETY elected Dr. W. G. Blake, Tahlequah, President; Dr. P. H. Medearis, Tahlequah, Vice President; and Dr. Joseph M. Thompson, Tahlequah, Secretary-Treasurer.

GARVIN COUNTY MEDICAL SOCIETY on December 19 elected the following officers for 1924: Dr. C. M. Pratt, Lindsay, President; Dr. H. P. Markham, Pauls Valley, Vice President; Dr. J. W. Stephens, Pauls Valley, Secretary-Treasurer.

CANADIAN COUNTY MEDICAL SOCIETY officers for 1924: Dr. W. J. Muzzy, El Reno, President; Dr. C. M. Pierce, Vice President, Dr. James T. Riley, El Reno, Secretary-Treasurer; Dr. G. W. Taylor, El Reno, Censor, and Dr. T. M. Aderhold, El Reno, Delegate.

GARFIELD COUNTY MEDICAL SOCIETY met December 21 and elected new officers for 1924 as follows: Dr. John R. Walker, Enid, President; Dr. A. E. Wilkins, Covington, Vice President; Dr. D. D. Roberts, Enid, Secretary-Treasurer; Dr. T. D. Hinson, Enid, Censor; Dr. L. W. Cotton, Enid, Delegate.

GRANT COUNTY MEDICAL SOCIETY met January 11th and elected new officers for 1924 as follows: Dr. I. V. Hardy, Medford, President; Dr. S. A. Lively, Wakita, Vice President; Dr. Charles A. Brake, Medford, Secretary-Treasurer. A fine meeting was held; Dr. A. S. Risser, Blackwell, read a paper and made an address.

GRADY COUNTY MEDICAL SOCIETY new officers for 1924: Dr. A. W. Nunnery, Chickasha, President; Dr. U. C. Boone, Chickasha, First Vice President; Dr. J. F. Renegar, Tuttle, second Vice President; Dr. D. S. Downey, Chickasha, Secretary-Treasurer; Dr. J. C. Ambrister, Chickasha, Delegate, 1923-4; Dr. Martha Bledsoe, Chickasha, Delegate, 1924-5.

ROGERS COUNTY MEDICAL SOCIETY at its last meeting elected the following new officers for 1924: Dr. W. F. Hayes, Claremore, President; Dr. Caroline Bassman, Claremore, Vice President; Dr. Melvin T. Means, Claremore, Secretary-Treasurer; Drs. A. M. Arnold, Claremore, W. A. Howard, Chelsea, and J. C. Bushyhead, Claremore, Censors; Drs. F. A. Anderson, W. P. Mills, and W. S. Mason, Committee on Health and Legislation

CRAIG COUNTY MEDICAL SOCIETY, at a regular meeting held at Vinita, elected the following members officers for 1924: Dr. F. M. Adams, Vinita, President; Drs. Wm. Campbell, Vinita, and C. F. Walker, Grove, Vice Presidents; and Dr. C. S. Neer, Vinita, Secretary-Treasurer. After a

dinner served by the hospital staff of the Eastern Hospital for the Insane, a clinic on Multiple Sclerosis was conducted by Dr. James E. Dwyer of Tulsa.

**TULSA COUNTY MEDICAL SOCIETY** Legislative Committee, has declared war to the finish on fake doctors and "quacks" in both city and county according to Dr. Charles D. Johnson, Chairman, and wholesale arrests and prosecutions are promised. The announcement came after a meeting of the legislative committee in Dr. Johnson's office, consisting of Drs. Johnson, A. W. Pigford, A. Z. Garabedian, J. C. Peden, M. W. Mayginnis, A. V. Emerson, C. H. Hall, and Charles H. Haralson.

**OSAGE COUNTY MEDICAL SOCIETY** met and elected the following for new officers for 1924: Dr. G. E. Stanbro, Pawhuska, President; Dr. E. N. Lipe, Fairfax, Vice President; Dr. Leonard C. Williams, Pawhuska, Secretary-Treasurer; Drs. G. W. Goss, C. E. White and Divonis Worten, all of Pawhuska, Censors. Speakers at the meeting were Dr. M. M. Rowland, Oklahoma City, on Malignancies of the Skin, illustrated by lantern slides, and Dr. G. F. Woodring, Bartlesville, on Bronchial Pneumonia of Children.

**CARTER COUNTY MEDICAL SOCIETY** elected the following officers: Dr. C. A. Johnson, Wilson, President; Dr. Walter M. Johnson, Ardmore, Vice President; Dr. S. DePorte, Ardmore, Secretary-Treasurer; Dr. F. W. Boadway and Dr. Walter Hardy, Ardmore, Delegates; Dr. A. G. Cowles and Dr. J. L. Cox, Ardmore, Alternates; Drs. T. J. Jackson, Marsden, G. E. Johnson, Ardmore, and J. C. McNees, Ardmore, Censors. The Society will hold a banquet at the Ardmore Hotel in February and the new State Health Commissioner is expected to attend.

**EIGHTH ANNUAL CLINICAL SESSION** of The American Congress on Internal Medicine will be held in the Amphitheatres, Wards and Laboratories of the various institutions concerned with medical teaching, at St. Louis, Mo., beginning Monday, February 18th, 1924.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address enquiries to the Secretary-General. Read the announcement on page iii, Advertising section.

Elsworth S. Smith, President,  
St. Louis, Mo.

Frank Smithies, Secy.-Gen'l.,  
1002 N. Dearborn Street,  
Chicago, Ill.

**OKFUSKEE COUNTY MEDICAL SOCIETY** met on January 14 at Paden with a general meeting and a banquet at the Commercial Hotel. About forty persons attended the dinner and were entertained with a musical program. A business meeting was held at Dr. J. S. Rollins' offices, while the ladies adjourned to Mrs. Rollins' home for bridge and further refreshments. New officers elected for 1924 are: Dr. C. M. Bloss, President; Dr. A. J. Stephenson, Vice President, and Dr. R. Keyes, Secretary-Treasurer, all of Okemah. Among those attending were Dr. and Mrs. F. L. Carson, Shawnee; Miss H. K. Shaw, Shawnee, Dr. A. C. McFarling, Shawnee, Dr. and Mrs. W. M. Gallaher, Shawnee, Dr. and Mrs. N. Price Ealy,

Castle, Dr. W. H. Davis, Castle, Dr. and Mrs. S. W. Burklin, Prague, Dr. H. C. Iles, Prague, Dr. R. L. Duncan, Prague, Dr. J. A. Kennedy, Okemah, Dr. H. Wesley Yeats, Okemah, Dr. H. A. May, Okemah, Dr. C. M. Bloss, Okemah, Dr. A. A. West, Guthrie, Dr. and Mrs. C. C. Bombarger, Paden, Dr. and Mrs. J. C. Dovell, Paden, Dr. and Mrs. J. S. Rollins, Paden.

**CUSHING MEDICAL SOCIETY** elected Dr. H. C. Manning, Cushing, Vice President, to succeed Dr. J. V. Blair, recently removed to Burkburnett. In order to make the Cushing Memorial Hospital better known as a strictly up-to-date institution, with laboratory facilities; and an institution granting equal privileges to all physicians and surgeons with a reputable standing in Oklahoma; the Cushing Medical Society plants to start an advertising program soon, in an effort to get neighboring practitioners to treat their patients in this hospital.

**PONTOTOC COUNTY MEDICAL ASSOCIATION** were entertained by the President, Dr. S. P. Ross, and Mrs. Ross, at the Harris Hotel at Ada, on the occasion of their meeting on January 8. Music, entertainment, and a banquet were the features of the evening, which was also attended by the members' wives, and the nurses from the various hospitals. Among those enjoying the affair were Dr. Catherine Brydia and husband, Dr. and Mrs. Breco, Dr. and Mrs. Cummings, Dr. and Mrs. Lewis, Dr. and Mrs. Lane, Dr. and Mrs. Faust, Dr. Jeffries, Mrs. Bullock, Dr. and Mrs. S. A. McKeel, Dr. and Mrs. McNew, Dr. and Mrs. Webster, Dr. and Mrs. Dawson, Dr. Craig, Mrs. Lucile Cox, Miss Davis, Miss Rockefeller, Professor Fentem, Miss Emmaline Dawson, Miss Marjorie Jackson, Miss Lillian Strite, Burgess Steed and Duford Merritt.

**POTTAWATOMIE COUNTY MEDICAL SOCIETY** held its annual meeting January 10, 1924. Surgical Clinics were held at the Shawnee General Hospital beginning at 9:00 A.M. and continuing until 1:00 P. M. at which time lunch was served at the hospital. At 2:00 o'clock Medical Clinics were held in the hospital which continued until 5:00. At 7:30 the annual banquet was held at the Christian Church. About forty physicians were present and enjoyed the feast, after which they repaired to the auditorium where a feast of the mind was enjoyed. After the President's annual address, which was filled with wit, humor and science, the following officers were elected for 1924: J. M. Byrum, Shawnee, President, E. L. Yeakel, Shawnee, H. L. Cone, Maud, and E. F. Hurlbut, Meeker, Vice Presidents, E. E. Rice, Shawnee, Censor, T. C. Sanders, Shawnee, was re-elected Recording Secretary and W. M. Gallaher, Shawnee, Corresponding Secretary. Dr. L. S. Willour, McAlester, installed the officers in a very clever and able address. Dr. J. H. Scott, Shawnee, gave a short history of the Pottawatomie County Medical Society, after which several members and visitors gave brief and inspirational talks on lines of scientific research, organization and appreciation.

### GEORGE ARTHUR BOYLE

Dr. George A. Boyle, Enid, a past president of the State Medical Association, died in that city January 1. The death of Dr. Boyle was not unexpected to those who were his intimates. For several years he had suffered with cardio-renal disease and lately had travelled to various sections of the country in the hope that his health might be temporarily improved. Despite the fact that he understood thoroughly the gravity of his condition, he was at all times in a cheerful state of mind, accepting the situation philosophically and courageously.

Dr. Boyle was born near Belfast, Ireland, March 13, 1857, coming with his parents to the United States shortly after the Civil war. Educated in Presbyterian College, Tarkio, Missouri, later graduating from Jefferson Medical College in 1887. He located successively at Louisburg and Winfield, Kansas, he moved to Enid in 1904, where he built up a large practice to which he attended assiduously until the last few years when his health prohibited his former activities. At this time he relinquished his connection with the Enid Hospital, with which he had been connected jointly with Dr. T. B. Hinson, who succeeded him in that work. Married in 1888 to Miss Anna Farnham at Paoli, Kansas, a daughter survives the union, Mrs. Boyle dying in 1903. Besides his daughter he leaves five brothers and three sisters, all of whom reside in the West. Dr. Boyle was a member of the Presbyterian Church and all masonic bodies. Scottish Rite Masonic services were held at "low 12," Enid, Tuesday night January 1. Funeral services were held at the Presbyterian Church Wednesday following, the body was taken to Louisburg for interment.

As president-elect of the State Medical Association he served the unexpired term, due to the death of Dr. John W. Duke, later serving the term for which he was elected. Since his location in Oklahoma, Dr. Boyle was constantly identified with the work of the State Association, serving as Councillor for several terms prior to his election to the presidency. He was a rather constant contributor of scientific papers during this time, always taking an active part in the sectional work in which he was specially interested as well as the active management of the affairs of the state organization.

Dr. Boyle was at all times open minded, generous and fair in his work, a smoother of the difficulties confronting the medical profession and never an agitator or obstructionist, this attitude making his life one of placidity and endearing him to his associates.

WOODS COUNTY MEDICAL SOCIETY held its first regular meeting for the year at Alva, January 22. Only three of the members were absent. Dr. Hall of Waynoka, read a paper on Cystitis, Dr. Ensor of Hopeton, read a paper on Influenza, and we had with us Dr. Arthur S. Risser of Blackwell, the District Counselor, who read an excellent paper on Team Work or Cooperation in Medicine. After the adjournment of the meeting all members repaired to the Chamber of Commerce Luncheon den where they were royally entertained with an elegant banquet by Doctors Bilby and Rogers. The banquet was enlivened by music and speeches by some of the members and invited guests. The doctors all had their wives and a number of prominent citizens were present.

The Woods County Medical Society meets regularly on the last Tuesday of each odd month, meeting a week earlier this month to be sure and get the dues in on time. Two of the members are designated to entertain at each meeting. The program is made out for the year and each member has to appear on the program at least once a year and if he does not present a paper when he is on the program he is supposed to be prepared for the next meeting. Not one has failed to appear during the past year.

### A NEW A. C. S. MONOGRAPH

The publication of a new American Chemical Society Monograph is announced by The Chemical Catalog Company of New York. This recent book by Dr. George W. Raiziss, PH. D. and Joseph L. Gavron, B. S., is entitled "Organic Arsenical Compounds." It is probably the most complete and comprehensive work on this subject that has ever been published.

Doctor Raiziss, Professor of Chemotherapy, Graduate School of Medicine, University of Pennsylvania, is well known for his research work and writings on arsenical compounds. He was the first laboratory worker in the United States to successfully develop American-made arsphenamines for use in the treatment of syphilis. Mr. Joseph L. Gavron has been associated with Doctor Raiziss in literary and laboratory work done in The Dermatological Research Laboratories of Philadelphia.

While this volume of 550 pages covers exhaustively the entire field of arsenicals from a chemical view-point, there is much of interest to those physicians particularly interested in the Chemotherapy of the arsphenamines.

## GENERAL SURGERY

Edited by G. A. Wall, M. D., F. A. C. S.  
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### OLD MASTERS

Ambrose Pare (1510-90) was a barber's apprentice when he came up from the provinces to Paris in 1529, and was a dresser at the Hotel Dieu and became an army surgeon eight years later, and made of himself the greatest surgeon of his time, by his courage, ability and common sense. He did not hesitate to thrust aside ignorance and superstition, if it stood in his way. Pare invented many surgical instruments, made amputation what it is today by reintroducing the ligature, which had almost fallen into abeyance. He was the first to popularize the truss in hernia; did away with the castration of the patient in herniotomy; introduced artificial limbs and eyes, massage and staphyloplasty, and made the first exarticulation of the elbow joint in 1536. He described fractures of the neck of the femur and strangury from prostatic hypertrophy. He was the first to suggest syphilis as a cause of aneurysm, and was probably the first to see flies as transmitters of infectious diseases. He induced artificial labor in uterine hemorrhage and made podalic version practicable. His principal works are his treatise on gunshot wounds (1545), his essay on podalic version (1550), and his great treatise on surgery (1564).

### ETHYLENE.—(Yearbook 1923, General Surg.)

This is one of the constituents of illuminating gas introduced by Luckhardt and Carter. In addition to an extensive series of animal experiments, twelve humans were anesthetized more or less deeply. Their preliminary report states that deep surgical anesthesia can be rapidly induced without any asphyxia, but, on the contrary, a sense of well being. Analgesia comes on before surgical anesthesia. When there is complete muscular flaccidity, the pulse is slightly decreased, if changed at all; respirations are slow but regular, and the countenance normal in color, or slightly paler. The induction was in no way unpleasant except for the first few inhalations of the concentrated gas which induced reflex swallowing. In some there was a period of excitement characterized by laughing preceding the anesthesia, in some this followed during recovery from the anesthetic. Recovery was always rapid on withdrawal of the gas. In all there was a weakness and sense of fatigue if the patient arose immediately on waking up. Slight epigastric distress was temporarily experienced in some, and in others a slight nausea persisted for several hours. In none did the nausea interfere with the next meal.

The possible advantages of ethylene over nitrous oxide for human anesthesia are:

(1) Anesthesia may be maintained: (a) In the absence of all signs of asphyxia. (b) In the absence of effects on blood pressure. (c) In the absence of dyspnea. (d) With complete muscular relaxation.

(2) There is rapid recovery after long continued administration, without after-effects.

These advantages would make its use possible in children, diabetic patients, old age, advanced arteriosclerosis, high cerebral pressure, operations on the brain and in major operations.

### ACUTE OSTEOMYELITIS.—Lewis, Dean, S. M. J. Nov. 1923. P. 861.

The author states that despite the amount of clinical experience which has been gained by a careful study of the different groups of cases of acute osteomyelitis and experimental work, there is still a wide divergence of opinion, as to the procedure to be followed in these cases, in the stage when usually seen. The embolic origin and its relation to suppurating foci have been definitely established says the author.

The intelligent treatment depends upon an early diagnosis and recognition of complications and sequelae. Treatment should be directed towards the prevention of general sepsis. The formation of large sequestra, the involvement of neighboring joints and disabilities incident thereto. Starr and Speed seem to think that the process begins in the cancellous tissue on the shaft side of the epiphyseal cartilage: The periosteum is stripped from the bone, and as tension increases beneath it, the infection spreads back through the vessels of the Haversian canals, to reach the marrow cavity. These conclusions are based upon X-ray pictures and a study of the tissues removed.

In spite of the emphasis which has been laid upon the early diagnosis, these cases still reach the surgeon too late, after irreparable damage has been done.

The factors causing death of the bone are not well understood; extensive necrosis may occur after the marrow cavity is opened and drainage established, and necrosis may be limited in extent when the periosteum is simply opened and the abscess drained.

The diagnosis must be made upon the deep-boring pain, localized tenderness over the focus, and the possibility of a primary focus of infection, from which bacteria were set free. The author says that in some ways the X-ray has interfered with the early diagnosis, since the changes occurring in the bone cannot be determined until definite changes have occurred between living and dead bone. These changes occur as late as the fifth day, and by this time the symptoms and signs should be so definite, that a mistake should not be made. Rely upon pain, localized tenderness over the seat of infection and temperature. Suppurative arthritis can be excluded, because joint motion is little, if any at all restricted, and the symptoms are not similar. In late cases, at the present time, a diagnosis of rheumatism is often made, and this should, in the author's opinion, be hardly possible since there is such a distinct clinical difference in the two diseases.

Early diagnosis is important, to prevent deformities, such as flexion contractures which occur; the doctor in charge is generally responsible for them when they do occur.

In his experience suppurative arthritis rarely occurs in the course of acute osteomyelitis, except in children who have a strep or pneumococcal osteomyelitis, when the focus in the epiphysis not infrequently ruptures beneath the capsular ligament. In very young children the clinical picture of the arthritis predominates and a small focus of osteomyelitis is overlooked. Failure to prevent flexion contractures accounts for much of the disability that occurs in osteomyelitis and is easily preventable, since once developed it is difficult to correct.

The author discusses the radical operation and the regeneration of bone following the same, and

states that regeneration does not always occur, especially in adults: Failure of regeneration of the periosteum, with nonunion, is one of the disadvantages of the radical operation, and another is the difficulty of preventing deformities during recovery.

The mortality from the radical operation seems high in the author's opinion: Mitchell in complete resection of ten tibias had six deaths and in a partial resection of the same bone had two deaths. The ideal operation can only be performed, if an early diagnosis is made and when the inflammation is confined to the cancellous tissue, but we rarely see it at this stage. There is a great diversity of opinion among surgeons as to the treatment of this relatively common disease. Early and wide opening of the marrow cavity has been advised by many, while others advocate marrow exposure only when it is suppurating. Rast studied 226 cases of acute osteomyelitis operated on; in seventy cases the marrow was exposed and ten of them, or fourteen per cent died; in 156 cases the marrow was not exposed, the subperiosteal abscess being merely drained by a free incision, only 12 died giving a mortality of only 7 per cent.

The author believes that in acute cases in which a subperiosteal abscess has formed that drainage of the abscess is first indicated. If the fever does not subside and the general condition improve, or there is definite evidence of a suppurating process in the marrow, the cortical bone should be removed and the marrow drained. Gentleness in the removal of bone is necessary in order to prevent the formation of sequestrae. Sharp instruments should be employed and the healthy bone spared so as not to kill it.

A number of cases are cited in detail and all in all, this is a very instructive paper and should be read in the original by every physician, and this especially applies to the medical man.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
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#### **RADIOGRAPHIC OBSERVATIONS IN CHILDREN CONSTIPATED FROM BIRTH.—I. H. Goldberger, Archives of Pediatrics, June, 1923.**

The writer calls attention to the fact that in this age a surgeon would not attempt to set a fracture without the aid of the radiograph, yet case after case of chronic constipation of unknown etiology is treated without any more to guide one than a hurriedly obtained history that a child has difficulty in having daily evacuations; or that the stool is hard and dry and that the quantity is small. Cases running a chronic course, particularly those dating from birth, should receive intensive study and close observation. With the investigations there should be a proper appreciation of the anatomy and physiology of the gastrointestinal tract and there should be a series of good roentgenograms, before deciding upon a diagnosis or determining upon any treatment.

It is necessary to determine the region of the bowel where the stasis occurs; whether in the distal colon and rectum or in the proximal colon. Also whether the condition is congenital or acquired. Under congenital causes are considered those due to anatomical peculiarities in structure and arrangement of the gastro-intestinal tract,

such as elongated and redundant colon, dilated cecum, pyloric obstruction, pylorospasm, kinks, etc. The acquired cases consist of three distinct types, namely (1) the atonic (2) the spastic and (3) the obstructive.

Goldberger made a study of fifteen children ranging from seven months to seven years. All except one came under observation because constipation was the predominant symptom which compelled them to seek help. Some of them went as long as one week without evacuations and one boy had gone for ten days. Each child was given an opaque meal made up of one part of bismuth subcarbonate and eight parts of formula, fermented milk or farina, and had instilled into the colon an opaque substance made of one part of barium sulphate to six parts of fermented milk. The findings were enlightening and showed a number of interesting conditions. Such as elongated colon, megacolon, pyloric obstruction, spasticity of rectum, figure of eight colon, incompetent ileocecal valve, etc.

He points out that the great difficulty experienced in the treatment of patients with chronic constipation is the inability to keep them under treatment long enough to bring about permanent relief. When parents are shown where the seat of trouble lies, by exhibiting to them x-ray pictures showing the defects, they become permanently interested in the treatment.

It is emphasized that cathartics do not solve the problem. The treatment and management is summarized:

1. The prompt withdrawal and discontinuance of all laxatives and cathartics.
2. The selection of some one in the family to supervise the child's daily routine.
3. Nightly instillations of warmed olive or sweet oil, in small quantities, high up into the colon at bed time. This is retained over night and until after breakfast the following morning, if possible. These are continued nightly for a period of at least four weeks, then every other night for two weeks, followed by intermissions of two nights, of three nights and gradually omitted until they are given but once a week, and finally at the end of ten weeks are left off entirely.

4. Regular attendance to toilet after breakfast and upon retiring, when child is made to remain until the bowel action is brought on. While at toilet the body should be flexed upon the knees, the feet supported on a box.

5. Plenty of exercise and free play.

6. The prescribing an adequate diet to meet the special needs of the individual child, especially where there is a history of taking plenty of protein foods that tend to cause intestinal putrefaction. These should be either limited or discontinued entirely.

The results in all the cases in the series reported, were 100 per cent satisfactory, measured by the ability of the child to have one, two or even three daily bowel evacuations, after treatment had been discontinued.

#### **PYELITIS IN INFANCY WITH SPECIAL REFERENCE TO DIAGNOSIS.—A. Graeme Mitchell, Archives of Pediatrics, Nov. 1923.**

Attention is called to pyelitis as being one of the commonly unrecognized causes of fever in infancy. The only localized symptoms manifested are slight disturbances of micturition and these are inconstant and so mild as to be easily over-

looked. Most cases occur in infants under two years of age. It is about four times as common in females as in males. The chief and only constant symptom is fever, ranging from 103 to 105 and being of an irregular septic type. There are probably many cases that go undiagnosed and run their course. It is common for the high fever of pyelitis to be attributed to an "intestinal upset." Fever without discoverable cause upon physical examination should always excite suspicion of the presence of pyelitis. No examination of a sick infant should be complete without a urinalysis. It may be a complication or sequel of most of the other diseases. The diagnosis rests upon the finding of pus in the freshly voided specimen of urine. It is better to examine the uncentrifuged specimen. More than two or three cells in each high power field is always suspicious. The absence of pus from one specimen does not exclude pyelitis, as it often does not appear while the temperature is high. The diagnosis will be rendered more accurate if the cells are counted in the same manner as white cells are counted in cerebrospinal fluid. When pus is present in large amounts it is more accurate to use dilutions as in making blood counts. If much clumping is present, vigorous shaking of the specimen and later of the diluting pipette is necessary. In health the urine of the infant and child contains two to four cells, or in females as high as 10 cells per c. mm. In concentrated urines there may be 20 or 30 per c. mm. When the count is as high as 60 per c. mm. it is quite certain an infection of the urinary tract exists. Large doses of potassium citrate are given during the acute attack, and at stated intervals afterwards, with the idea of preventing recurrence.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
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**STUDIES ON THE CHEMOTHERAPY OF SILVER AND ARSENIC COMPOUNDS IN EXPERIMENTAL TUBERCULOSIS.**—Maurice I. Smith. *The American Review of Tuberculosis*, May 1922.

The author conducted a series of experiments upon a large number of guinea pigs, on the chemotherapy of some arsenic and silver compounds in tuberculosis. He concludes that neoarsphenamine and silver arsphenamine have a very slight inhibiting action on the growth of the tubercle bacillus in vitro. Colloidal silver oxide has no effect on its growth, while silver methylene blue has considerable inhibiting action.

None of these substances has any favorable influence on the course of the disease when administered to experimentally infected animals.

**TUBERCULOSIS IN INFANCY AND CHILDHOOD.**—Lawrence Weld Smith. *The American Review of Tuberculosis*, May 1922.

The author presents an unusual case of double miliary infection in a child of eleven years, in which the tuberculous infection was probably present for several months but was recognized only three weeks before death by a sudden and overwhelming generalized lighting up of the process.

He also presents the autopsy findings of 40 cases occurring in 200 consecutive autopsies at the Infant's Hospital during two years. He considers the age incidence the most striking feature. Six cases occurred in children under six months, eleven between six and twelve months, eighteen between twelve and fifteen months and five from sixteen to twenty-four months. He thoroughly analyzes the statistics given and concludes from the pathology that tuberculosis in infants is an entirely different disease from tuberculosis in adults. Its lesions are those of an acute infectious disease more of the order of typhoid fever or pneumonia. He deduces its tremendous prevalence from its high incidence, and the lack of immunity in infancy from a 20 per cent mortality in a hospital series of infants under two years. He urges the need for further preventive measures.

**CORPORATION CARE OF TUBERCULOUS EMPLOYEES.**—Robert A. Perris. *The American Review of Tuberculosis*, April 1922.

This experiment is being worked out by the Standard Oil Company of California. The objects are twofold (1) to restore to work those whose disease has not progressed beyond hope of cure, (2) to furnish sanatorium care for life to those employees for whom there is no hope of recovery. With these objects in view all tuberculous employees are offered the opportunity of entering the Company sanatorium at Colfax. All patients are under the control of the medical superintendent. No patient is dismissed until able to take up light work which is prescribed by the medical superintendent. The treatment is that afforded by any well-conducted sanatorium.

The lifting of all financial worry and the solving of the problems of returning to home life and work are the biggest factors in the success of this experiment. The results so far justify the thought, time, energy and money expended in the work.

**DEMINERALIZATION IN TUBERCULOSIS. DISTRIBUTION OF CALCIUM IN THE TUBERCULOUS GUINEA PIG.**—O. Barkus. *The American Review of Tuberculosis*, April 1922.

It has been thought that in infected animals the concentration of inorganic material is high in normal and reduced in diseased tissue. The author desiring to test this theory and to determine the concentration of the various cations in tuberculous animals, infected guinea pigs with known strains of tubercle bacilli and sectioned the secretory organs immediately after the death of the animal. He paid particular attention to the calcium content because of its supposed importance for the issue of tuberculosis. No appreciable loss of calcium due to progressive tuberculosis could be proved in any case.

**A FEW OBSERVATIONS ON IMMUNITY TO TUBERCULOSIS.**—Allen K. Krause. *The American Review of Tuberculosis*, May 1922.

The tissues react initially with comparative vigor to micro-organisms which we call avirulent but although there is a transient pathological result, there is no infection in a true sense. This seems due to a native or congenital (species) immunity. The tissues react indolently at first to virulent bacteria, the germs maintain themselves

in the tissues and we have a true and lasting infection. After this infection the tissues take on new powers of reaction which consists in an exaltation and enhancement of their native qualities and through these they become relatively immune. The real tuberculosis "case" begins only with the establishment of the immune state, not with the fading of resistance. The immune state is conservative at bottom, but through and because of it, all types of tissue changes to the point of tissue destruction may occur. It may thus blot out the life of the body which its reaction is designed to preserve from bacillary invasion.

#### HEALING BY RESOLUTION IN EXPERIMENTAL PULMONARY TUBERCULOSIS.—Leroy V. Gardner. *The American Review of Tuberculosis*, May 1922.

The author has attempted to work out by histological study the mechanism of the healing process in experimental tuberculosis produced by an organism of known low degree virulence in the Saranac Laboratory. Twenty guinea pigs were infected by the inhalation method and killed at intervals of from two weeks to one year and five months. All had reacted to tuberculin. The lungs were carefully sectioned and many photomicrographs made. In arranging the series of photomicrographs no attention was paid to the element of time but an attempt was made to show the sequence of the histological development of the lesions. These photomicrographs demonstrated that the strain of tubercle bacilli used is capable of producing lesions which progress to caseation, and that this caseation together with the accompanying proliferation of fixed tissue cells is then absorbed. The healing process is one of resolution, of which no trace remains at the site of former infection.

It is not yet demonstrated that human pulmonary tuberculosis, being as it usually is, an auto-genous infection upon sensitized soil, most of the time with virulent organisms, can heal by resolution. It is believed, however, that primary infections in the human body do disappear leaving no visible alteration in the tissues. The author believes it possible that such a mechanism as he describes may be involved.

#### OBSERVATIONS ON THE DIAGNOSIS OF ACTIVE TUBERCULOSIS IN CHILDREN.—Cole B. Bibson and William E. Carroll. *The American Review of Tuberculosis*, May 1922.

A statistical study of 265 cases admitted to the Meriden State Sanatorium during 17 months is presented. The author's attention centered particularly on the differential diagnoses and the question of activity. They were especially interested in the Wildbolz auto-urine test and consider it to be of real diagnostic and prognostic aid.

While it is impractical for use in general practice, it is of real aid in sanatorium work in classifying for discharge or further treatment of such cases as may be under observation. They feel that it abates to a considerable degree the difficulties of diagnosing tuberculosis in children.

#### A CRITICISM OF RECENT INTERPRETATION OF ANNULAR SHADOWS IN LUNG ROENTGENOGRAMS.—M. P. Burnham and Philip King Brown. *The American Review of Tuberculosis*, August 1922.

Until recently the "ring" shadows frequently seen in roentgenograms were considered evidence of cavity formation. Heise, Brown and Amberson have recently advanced the opinion that these shadows were not cavities but annular pneumothoraces. The authors believe this theory wrong and not supported by any proof. Localized and encapsulated pneumothoraces are easily recognized as such in their opinion, while cavity formation is recognized by a sign complex which consists of (1) more or less well defined ring shaped bands of increased density (2) marked diminished density within these bands, (3) linear markings of lung are not seen. Many variations of this sign complex are met with. Stereoscopic plates, with very short exposures, taken in the antero-posterior direction and at right angles to the antero-posterior plane are used in diagnosing these conditions. This subject is of growing importance not only in prognosis, but in deciding on therapy by collapse.

#### THE NATURE OF TUBERCULOSIS OF THE EYE.—William C. Finnoff. *The American Review of Tuberculosis*, April, 1922.

Tuberculosis of the eye occurs at all ages and in both sexes about equally, it is found most frequently, however, in young adults. It may be either primary or secondary. Primary tuberculosis of the eye is of exogenous origin and is found in the exposed parts; the eyelids, conjunctiva, cornea and lachrymal sac are the common sites. Primary intra-ocular tuberculosis not associated with trauma is rare.

Primary foci in some other part of the body are the source of infection of the eye in secondary tuberculosis. The bacilli passing into the blood stream, are carried to the eye and accidentally lodging in ocular blood vessels produce eye tuberculosis. All parts except the lens may be attacked in this manner. It may be either acute, subacute or chronic. The acute type manifests itself as tubercles of the choroid associated with an acute miliary tuberculosis or with a tuberculous meningitis; or as an acute involvement of any of the ocular structures which often terminates in destruction of the eye-ball and necessitates enucleation. In chronic ocular tuberculosis the disease is usually confined to one portion of the eye with little or no pain and the progress of the disease is slow. Slight activity may be present over long periods of time and recurrences of activity after apparent cures are common.

Close co-operation between the ophthalmologist and the internist is very necessary in diagnosing and treating these conditions, many of which are obscure. Careful use of old tuberculin is recommended for diagnostic purposes. The treatment consists of hygienic measures, tuberculin and local therapy. It is advisable to continue treatment for several months after all evidence of activity has disappeared.

**HELIO THERAPY IN THE TREATMENT OF LARYNGEAL TUBERCULOSIS.**—William C. Voorsanger. *The American Review of Tuberculosis*, May, 1922.

Laryngeal tuberculosis probably causes more discomfort to and more concern to those treating pulmonary tuberculosis than any other complication. The author assumes that one out of every three patients has some laryngeal involvement. All methods of treating it have failed and many have caused irreparable damage through cauterization and the accompanying tissue destruction and cicatrization. Obstructive swelling where the patient will either starve or choke to death is the only excuse for direct applications to the larynx.

He presents two cases in detail illustrating the failure of local applications and the success of reflected sunlight, using the solar therapeutic laryngoscope of composition metal. He considers his experience too brief to venture an opinion as to whether the results will be permanent but believes they will be if the pulmonary tuberculosis remains arrested.

#### **THE PREVENTION OF TUBERCULOSIS.**

Dwight M. Lewis. *The American Review of Tuberculosis*, May, 1922.

Two facts seem well established; (1) that practically everyone has the opportunity to contract tuberculosis during childhood, and (2) that in the main the disease is easily resisted and overcome. It seems evident that the disease whether bovine or human in type may be activated or reactivated by all forms of pathologic microorganisms and that the balance or resistance of the infected individual is measured by his defects in their relation to air and food metabolism. Any factor tending to the correction of anatomical defects and to the protection against contaminated water and filth-borne diseases is a vital one in the prevention of tuberculosis.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

**ANTIGENIC RELATIONSHIPS OF BACILLUS TYPHOSIS.**—Elliott S. Robinson, Brady Lab., Yale Univ. School of Med., Jr. of Bact., Nov. '23.

Conclusions: 1. Numerous typhoid strains show considerable antigenic differences.

2. This difference is not sufficient to permit the designation of types or groups.

3. Failure of a strain to be agglutinated by an anti-typhoid serum is not proof of the non-typhoid nature of the strain; nor is the failure of a serum to agglutinate a positive strain of typhoid proof of a lack of typhoid agglutinin in the serum.

This is a very interesting and valuable piece of research because it will help to explain why it is sometimes impossible to get a positive Widal agglutination test on the blood of a patient who has nearly all the other clinical symptoms of typhoid. Some may say, "Yes, it just helps to prove that laboratory tests aren't worth a darn." "You can't depend upon them." If you do depend upon them, to the exclusion of the evidence as

presented by the other clinical symptoms, they won't be "worth a darn" to you. The laboratory has spoiled a lot of good clinicians, because, on the very dangerous ground of the positive or negative finding of a single laboratory test, it has been willing to say positively that such and such a disease is present or absent. The wise doctor will not let the laboratory lead him astray by such statements and the wise laboratory will not allow the doctor to make any such deductions from the laboratory findings. The sooner the laboratory and the doctor learn to consider laboratory findings only in conjunction with the other clinical symptoms, the better it will be for the patient.

**AN ADEQUATE LABORATORY SERVICE IN THE MODERN HOSPITAL.**—Ward Burdick, Denver, Colo., Secy. Amer. Soc. of Clinical Pathologists. Read before the Clin. Cong. of Amer. Col. of Surg. Chi. Oct. 1923.

Personnel: The personnel of the hospital laboratory should include, 1st, a clinical pathologist, (a graduate M. D.)

2nd, a young physician in course of training to become a clinical pathologist.

3rd, as many technicians as the requirements of the institution may demand.

Location: The laboratory should be on the top floor of the hospital, with a northern exposure, and as near to the operating room as possible. There should be at least 500 square feet for every 100 beds. The space should be divided into several separate departments, either sections of one large room or separate rooms, at least one private office and record room for the pathologist in charge.

Scope of Service: Routine blood counts and urinalysis on all cases. Coagulation time on all tonsil and adenoid cases. A Wassermann test on all chronic cases. Sputum on all chest cases. Blood cultures on all case with temperatures over 102 degrees lasting for three days. Throat cultures on all suspects and undiagnosed cases. Stools on all diarrheas. Smears and cultures on all discharges.

The average physician does not know exactly what laboratory work his patient should have, so does not order them. The above will many times assist in clearing up the case before the tests suggest themselves to him.

Finances: A "flat fee" is permissible only for the routine blood counts and urinalyses. Subsequent examinations to show the progress of the disease or the result of treatment should be charged for at the regular fee. The usual fees in vogue should be charged for the more complicated tests. The hospital laboratory should be financed by charging each patient for the work performed.

**SPECIFIC HYPERSENSITIVENESS AS A COMMON CAUSE OF ILLNESS.**—Dr. W. W. Duke, Kansas City, Mo. *Medical Herald*, July, 1923.

"A certain large percent of individuals inherit a constitution which makes it possible for it to become readily hypersensitive to foreign matter. Once sensitive, the individual may have severe symptoms of reaction whenever he comes into intimate contact with the substance to which he is sensitive. Patients are frequently specifically hypersensitive to certain varieties of pollen, less frequently to substances which can be extracted

from the stems, roots, leaves or woody matter of plants, also to products obtained in the distillation of coal, wood and crude oil, also to animal hair or feathers or to dust, smoke, foods, infectious products, insects, etc.

"Contributory causes are non-specific irritations of any sort, reflexes, infectious, functional or organic diseases. The immediate effect of a contributory cause often deceives the patient and leads him to blame it for his illness rather than the primary cause—specific hypersensitiveness.

"The more common symptoms are the ocular, nasal, pharyngeal, bronchial, cutaneous and reduced blood pressure, less often gastro-intestinal, neurological, joint, bladder and obscure symptoms.

"The diagnosis can be made in a majority of cases through information gained by history, physical examination, cutaneous tests, ophthalmic and clinical tests. The condition can be relieved in a large percent of cases by avoidance of the substance to which they are sensitive. When this is impossible or impractical, specific protein treatment is justifiable. Adrenalin is useful for temporary relief."

#### THE EPIDEMIOLOGY AND PREVENTION OF DENGUE.—M. D. Levy, M.D., Houston, Texas. Texas State Journal of Medicine, July 1923.

Dengue is essentially a coastal disease. The transmission of the disease has long been associated with the mosquito and all recent work has proven this true. At first the *Culex quinquefasciatus* was thought to be the cause but experimental work has proved this not to be true; both in Texas and in tropical countries where the disease is prevalent but it has been proved beyond a doubt that the *Aedes aegypti* is the cause.

The more or less persistent belief that dengue is in some way related to yellow fever or that yellow fever frequently follows dengue is due to the unguarded statements of some physicians. The similarity in the epidemiology of the disease is probably the basis of this belief and the mass of evidence in recent years has proved that both diseases are conveyed by the same species of mosquito, however, experiments have proven conclusively that the organism of dengue is not any known protozoan form.

Four different types of dengue have been distinguished. (1) The Evanescent type with only a slight attack of fever. This type is so mild it would hardly be recognized except during an epidemic. (2) The Interrupted fever type and (3) the Saddleback type are very similar and are the types usually encountered during an epidemic. (4) The Continued fever type is rare and does not show the remissions or intermissions of temperature so common in the usual forms of the disease. To these there may be added similar diseases under other names such as the seven day fever of India, which is now considered a form of dengue.

The occurrence of these varieties of disease in different parts of the world would suggest that it is possible for others than the *Aedes aegypti* to transmit the disease.

The prophylaxis or prevention of dengue is—"get rid of the mosquitoes."

From a public health standpoint we might almost wish dengue were more fatal so that the people would give the same cooperation as they have in the eradication of yellow fever. It is obvious that with the first appearance of the dis-

ease in a community, isolation and screening should be done immediately. A few careless dirty individuals in a community may nullify any campaign against the mosquito by leaving vessels filled with water standing around.

To sum up, dengue can be eliminated by the co-operation of the public with sanitarians and public health officials and only in this way may we hope for its eradication.

#### THE PREVENTION AND TREATMENT OF DIPHTHERIA.—Lee Rice, M.D., Texas State Journal of Med., Dec. 1923.

Diphtheria carriers are found to vary between 2 per cent and 7 per cent of population. Milk-borne epidemics are not infrequent and water supplies may carry virulent organisms. Very young infants are relatively immune to diphtheria, while children between the ages of one and six have an immunity of less than 40 per cent. Adults, on the other hand, have a high immunity, around 90 per cent, but they contain that susceptible group of carriers which is so essential a factor in the occurrence of epidemics.

The highest susceptibility of diphtheria is found in children of pre-school age, but during the first years of school exposure to carriers and to actual cases is more frequent, and it is usually the school child who carries the disease home to some younger child.

The largest work of prevention should begin in the public schools. Sidbury states that over 95 per cent of diphtheria could be eliminated from this country if the Schick Test and Active Immunization by toxin-antitoxin mixtures were generally and intelligently used.

Diphtheria toxin may and can be fixed by the body cells within six hours. If this misfortune arises in any case no amount of antitoxin that may be given will be of any avail as far as neutralizing that fixed toxin. Early diagnosis is, therefore, of the utmost importance. This can be made by suspecting and culturing every membrane on the throat or bloody discharge from the nose. Of even more importance than this is the learning of the early clinical symptoms of diphtheria so that we will have the courage to give antitoxin at once and not wait even 12 hours for the report from the laboratory on our cultures.

#### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.

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#### FURTHER OBSERVATIONS ON A NEW METHOD OF PREVENTING POSTOPERATIVE INTRA-OCULAR INFECTIONS: A REPORT OF 1,250 SUCCESSFUL CASES. Bell, G. H., Arch. Ophth., 1923, lli, 136.

The author recommends a preliminary iridectomy in every case of cataract following twenty years of experience in which time he has had 1,250 cases without a single primary infection. The technique is as follows:

Focal infections such as diseased teeth and tonsils, and toxæmias of the intestinal tract are overcome two or three months preceding the operation. Then, if the eye appears clinically clean the opera-

tion is performed regardless of the bacteriological findings.

Twenty-four hours before the operation a dose of castor oil is given to cleanse the intestinal tract.

Two hours before the operation a smear of the conjunctival sac is taken and two drops of a 1 per cent solution of silver nitrate are instilled into each eye. On the operating table, the brow, eyelids, and adjacent skin are washed with castile soap and the eyes are washed out with normal saline solution.

During the operation sterile rubber gloves are worn by the surgeon's assistants, and a conjunctival flap is formed.

After the operation, two drops of a sterile solution of atropine 3 per cent and a twenty five per cent solution of argyrol is used and both eyes are bandaged for forty-eight hours. Thereafter the eye is dressed and atropine and argyrol are instilled every two days.

In doubtful cases, silver nitrate is instilled in the eyes five hours and two hours before the operation.

#### STRICTURE OF THE ESOPHAGUS FOLLOWING SCARLET FEVER.—Porter P. Vinson, *Laryngoscope*, 1923, xxxiii, 949.

The author reports two cases of stricture of the esophagus following scarlet fever. In the first case the chief complaint was difficulty in swallowing solid food. The patient, a girl eight years of age, had an attack of scarlet fever one year prior to the time of examination. Following this attack she was unable to swallow solid forms of food and when an attempt was made to swallow solid food it was regurgitated with a large amount of mucus.

A roentgenograph examination of the esophagus revealed an obstruction at the juncture of the middle and lower third of the organ. On passing a sound a stricture was located 25 cm. from the incisor teeth. This was easily dilated to 38 F., but the child was not able to remain under observation long enough to obtain permanent relief. However, in spite of insufficient dilation, her present condition is quite good and she is able to swallow better than before the stricture was stretched.

The second case occurred in a woman thirty-eight years of age. She had an attack of scarlet fever at the age of seven, and immediately afterward, difficulty in swallowing was noted. This would last only one or two days at a time and occurred rather infrequently. There was relatively little discomfort from the age of ten to twenty-three years. At the age of twenty-eight esophageal closure was complete for several days, and two years later a similar attack lasted for six days. During the latter part of February 1922, there was another period of complete closure, and for two weeks before examination she had been able to swallow liquids only.

Roentgenographic examination revealed obstruction in the lower portion of the esophagus and on passing a sound the stricture was located 33.8 cm. from the incisor teeth. The stricture was gradually dilated to 42 F. with complete relief from dysphagia.

#### A STUDY OF SINUSITIS IN CHILDREN, PRELIMINARY REPORT.—John M. Lore, *Laryngoscope*, 1923, xxxiii, 941.

The author quoting Dean states that from 70 to 80 per cent of the cases of sinusitis in children get well after a tonsil and adenoid operation is performed. The difficult cases occur in the 20 to 30 per cent which fail to get well after the tonsils and adenoids are removed. In this group of cases the vast majority are ambulatory and it is difficult to hospitalize these cases.

These cases are usually undernourished and in the majority it was found that milk was seldom used. Some cases, however, used a well balanced diet.

The author reaches the following conclusions:

Tonsils and adenoid operation when first operation was unsuccessful.

Correction of diet when indicated.

The use of cod-liver oil in all cases.

Nasal hygiene by means of suction-irrigation, argyrol lubricants, etc.

Antral lavage when indicated.

Correction of deflected septa when drainage is interfered with.

Uncapping of ethmoids and sphenoids only in severe cases when the above treatment has not helped, as in cases of polypi.

#### POSTOPERATIVE COMFORT IN TONSIL CASES.—Harkness, G. F., and Rock, J. E. *J. Iowa State M. Soc.*, 1923, xiii, 331.

The authors reached the following conclusions from replies received to a questionnaire concerning the methods used to overcome the discomfort following tonsillectomy.

1. Pain is the chief problem after this operation.

2. There is extreme diversity of opinion in regard to its relief.

3. It is generally agreed that postoperative pain will be considerably less if care is taken not to injure the pillars during the operation.

4. Some surgeons give one-fourth grain morphine and one-one hundred and fiftieth gr. of atropin one-half hour before the operation. Within the first three hours after the patient returns from the operating room the morphine is repeated. Later, it is again repeated, the dose then being one-sixth or one-eighth gr. An ice collar is worn most of the first twenty-four hours.

5. Before and often between meals, a gargle of 24 gr. of aspirin in 4 oz. of water is given and the patient is urged to swallow some of the solution.

6. The semi-suspension method is used to pull up on the angles of the jaws during eating and drinking, and the patient is urged to take a considerable quantity of fluid.

7. Orthoform, anaesthesin, and various other powders have not been found satisfactory.

8. Alkaline gargles and irrigations, preferably hot, are used three times daily.

9. Swabbing the fossae with castor oil or liquid petrolatum and gargling with aspirin solution has a soothing effect.

**ORTHOPAEDIC SURGERY**

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

**1. Clinical Case Report.**

**CONGENITAL DISLOCATION OF HIP.**—W. M., age 4 years admitted to St. Anthony Hospital May 11, 1922.

There was just one symptom which brought this child for treatment, i. e., a limp. This limp was noticed at the age of one and one-half years but the child had been ill a great deal, and had developed a heart lesion so that nothing was done. Weight at birth was six and one-quarter pounds. Forceps delivery. Bottle fed. Had influenza, whooping cough and pneumonia twice. Frequent sore throat led to removal of tonsils one year ago. Boy is well at the present time and plays just like other children of his size.

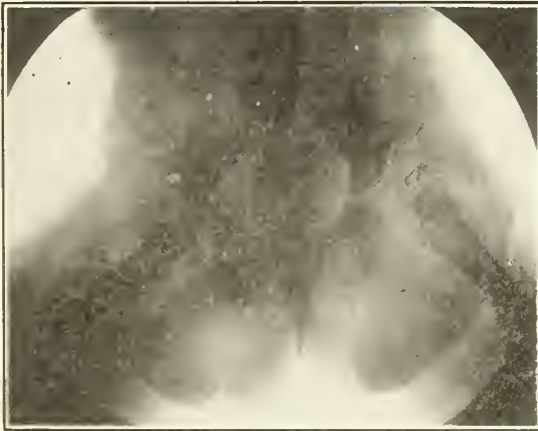
On physical examination we find a well nourished boy of four years who walks with a marked limp in which the left hip seems to give way to the weight of the body at each step. Measuring from the anterior spine to internal malleolus, the left leg is one inch shorter than the right. Abduction is limited to 50 per cent of normal but other

cated, so the operation for reduction was performed.

**In Cast After Reduction**

There are numerous methods employed for this operation, and numerous machines and tables to facilitate matters. A few prefer the open method but closed reduction is the more popular. The first reduction on a living subject was by Humbert in 1830. It was not until Lorenz demonstrated the importance of permanent fixation for a long period that the operation became practical.

The writer uses a modified Lorenz method. The abductors were stretched while thigh was flexed at right angle and the knee then forcibly extended, to stretch the posterior soft tissues. Traction was then made on the leg for ten minutes, with five minute intervals. With the thumb pressing upward on the trochanter the thigh was fully flexed and abducted in a circular manner, rotating outward and downward. The reduction took place with a snap which indicated a deep acetabulum and a favored prognosis. A plaster spica was applied including hips and all of left leg, with the thigh in complete flexion and abduction and knee flexed. This cast was changed in ten weeks and another applied in the same position. The child was allowed to walk the best he could, casts were changed every eight to fourteen weeks. At the end of one year the leg was brought to normal position and cast removed. Two years later X-Ray showed good reduction.

**Before Reduction**

motion normal. Trendelenburg sign is positive, i. e., when he stands on left leg and flexes the right knee on the trunk, the right hip is lowered instead of elevated. With finger on trochanter and thumb placed slightly internal to the pulsating femoral, immediately below Poupart's ligament, the head of the femur can be felt to rotate under thumb on the right side, but is missing on the left and felt above acetabulum in a new socket. The acetabulum is well formed.

Discussion: The heart in this boy produced the questionable factor in regards to treatment and prognosis. There was a heart murmur at the apex of the most astonishing type. It was transmitted to the back. There was considerable enlargement. Without going into detail on the diagnosis of the cardiac lesion, suffice it to say that about twenty-five doctors examined this patient which was demonstrated at a meeting of the State Medical Society, and only two held the opinion that it was safe to give an anesthetic and reduce the hip. Judging from activity of the boy, the heart was well compensated, and anesthetic for tonsilectomy one year previous, was uncomplicated.

**After Treatment**

# OPEN INTERVENTION IN MALLEOLAR FRACTURES.—G. Picot, Jour. de Chir., 21, 529, 1923.

The irreducibility of certain malleolar fractures and the poor results in those not completely reduced led the author to operate on twelve recent cases. All showed fractures of the posterior margin of the tibia which were not always visible in the X-ray plate.

An operation suitable for the majority of cases is described. The approach is by a J incision along the lateral border of the tendo Achilles and swung inwards distally. The tendo Achilles is divided obliquely and turned back, the communicating artery is cut between ligatures, and the flexor longus hallucis is cut from the fibula in the lower portion of its attachment and retracted mesially to expose the seat of the fracture. The periosteum of the tibia is incised and the fracture is reduced by hooking up the proximal fragment, while an assistant flexes the foot and presses down upon the distal fragment. Coaption must be perfect. Fixation is maintained by a screw. The wound is closed in layers and the tendo Achilles is lengthened. Movement is begun on the fourth or fifth day and walking in thirty days. Good results were obtained in all twelve cases.

## GENERAL MEDICINE

Edited by Wann Langston, M. D.  
State University Hospital, Oklahoma City

# THE CLINICAL VALUE OF ACIDOPHILUS MILK.—Wm. Earl Clark, M.D., and Mathew White Perry, M.D. N. Y. M. J.—CXVIII, 12—Dec. 19, 1923.

After eighteen months' use of acidophilus milk, the authors report observations on 84 adult cases; each patient having had a quart of the milk a day for six weeks. In all but twenty cases the patients used with the quart of milk 75 grams of lactose daily which enables the change in flora to occur more rapidly.

Fifteen adult patients to be treated for chronic constipation were given the milk for six weeks—thirty of whom were given the milk with 75 grams of lactose a day. The results in general show that acidophilus milk with lactose has a distinctive laxative quality, while the milk alone did not show such an effect. The general tendency was toward a gain in weight.

Patients who seemed to be especially benefitted were those who complained particularly of an excess of intestinal gas, of flatulence and of passage of large amounts of gas by rectum—23 out of 27 patients reported marked improvement.

Five patients between the ages of sixty and seventy years asked for treatment because of intestinal gas and bloating. Relief from the digestive disturbance was marked, milk constipation was relieved and in one case with high indicanuria and marked lethargy, but with a normal blood chemistry, the use of the milk caused a rapid clearing of the lethargy and indicanuria.

In six cases diagnosed as chronic enterocolitis, rest in bed and a diet deficient in roughage was also employed. In all cases the patients made a rapid recovery and have remained well at the end of a year. In one case of sprue there was rapid

recovery coincident with the use of the milk and lactose and experienced a gain in weight.

Three out of four cases of eczema, which specialists believed to be due to toxic intestinal absorption experienced recovery with the use of the milk and lactose. Four out of eight patients with psychoneurosis, probably due to autointoxication reported improvement.

# MODERN METHODS OF TREATING LOBAR PNEUMONIA.—Henry M. Thomas, Jr. M. D., A. J. M. S. CLXVII, 6, December, 1923.

The severe toxemia must be combatted by every form of elimination possible, hence, forcing fluids to three or four thousand cubic centimeters a day allows bowels, kidneys and skin to function best. Should vomiting or delirium interfere with fluid intake, it may be given subcutaneously or by Murphy drip.

No effort must be spared to relieve the heart muscle. Movement must be prevented as much as possible. Levy has shown that the digitalized heart does not dilate as readily during pneumonia as the undigitalized. This would seem to indicate early administration of digitalis, and certainly it should be begun at first signs of myocardial insufficiency. Sudden heart failure may require morphine and atropine, or venesection. Caffein (sodio-benzoate) and camphor (in oil) may be required.

For the effects of toxemia on the peripheral circulation, hydro-therapy is recommended. Epinephrin or pituitrin are sometimes helpful in raising blood pressure and strychnine for its effect on the medullary center. Turpentine stupes, turpentine enemata, and if necessary, pituitrin for tympanitis, ice bag, strapping, and morphia for the pleuritic pain; heroin, gr. one-twelfth for the non-productive cough. If great cyanosis and dyspnea be present, oxygen may help.

Specify Therapy: Type L Serum in the corresponding type of pneumonia. The author believes we have a valuable adjunct in quinine. He recommends quinine muriate 2.0; Urethane 1.0; Aqua dist. q. s. ad 20.0—5 cc intramuscularly—repeat in 24 and 48 hours if necessary.

The author summarizes as follows:

(1) We must never lose sight of the importance of general therapeutic measures.

(2) Of the special measures Type 1 Antipneumococcus serum is the only one which has given satisfactory results in a large enough series to warrant its further use.

(3) Quinine therapy seems very promising and may subsequently prove to be of great value.

# STATE-WIDE CANCER CAMPAIGN—FEBRUARY 15TH TO MARCH 15TH

It is no longer necessary to even suggest to the physician of observation and experience the appalling need of more enlightenment upon the subject of cancer among the laity. We still, though less frequently, see some cases of advanced cancer who have been treated through the early and curable stages of the disease by some M. D. under a diagnosis of an "inflamed wart" or "mole," a "weed in the breast" or "change of life."

The illiterate, arrogant, irregular "doctor," though he may be licensed by our State as qualified to practice medicine, we can hardly expect to reach in our campaign excepting through the

laity. It is possible that some of the laity through our propaganda may become so well versed in the symptoms of cancer as to suggest the diagnosis to him.

Notwithstanding some of our discouragements, you should know that since state-wide cancer education was begun, more than two years ago, reports are coming from many places that more patients are calling upon their physicians at the first manifestations of cancer.

'Tis true that many are being examined who have not the slightest symptom of cancer. Though how much more pleasant it is after examination to be able to send them home with all anxiety relieved than with the saddening sentence "too late to cure."

I am pleased to announce that during a thirty-day campaign this year beginning February 15th and ending March 15th, we are to have the full cooperation and organization of the Oklahoma Public Health Association. Their secretary and manager, Mr. R. H. Hixon, Oklahoman Building, Oklahoma City, is already rendering us valuable service and with his County Chairmen will in certain localities handle the entire work. Much of the printed matter which is new has been received and is ready to go out to the Counties which are organized.

The Public Health Association has also promised to finance the purchasing and showing of a special film prepared for Cancer Education. This film, a two reel production, is full of facts and information on cancer which has been woven into a beautiful home love story entitled "Reward of Courage." This film is now in our office ready to go out to various cities and towns where arrangements can be made and the larger number of people reached.

Doctor, education upon the subject of cancer is a sacred duty which falls most heavily upon us who are best qualified to give such information. Let us keep our thoughts and give advice far above a plane of selfishness. Teach our people known facts about cancer. Teach them that in early diagnosis only can a cure be expected. That the treatment of cancer, whether it be by surgery, thermo-cautery, the deep x-ray or radium, is to be selected by the physician according to the particular location or indications in the case. Remembering that whatever the method used, it must be total and complete destruction of all malignant cells.

Fully anticipating your fullest cooperation and help, I am

Everett S. Lain,  
Oklahoma City.  
State Director  
American Society for Control of Cancer

#### ALCOLO AMONG LEADERS

Since its introduction to the trade, Alcolo, the rubbing alcohol manufactured by John T. Milliken & Company, of Saint Louis, has assumed its place as one of the fastest selling alcohol rubbing lotions in the United States.

The reason for this probably is the fact that the product contains 92 per cent alcohol but has not Benzol or Acetone in it. As an external application it is very effective, being non-injurious to the most delicate skin. Its medication, under special formula, induces an invigorating and tonic

effect upon the skin. It is enjoying wide use among hospitals, since it can be diluted 50 per cent and still be an effective lotion. Its very pleasant and mild odor is an appealing feature.

Physicians report excellent results with it and when used as hot-pack, reduces swelling in cases of blood poisoning, etc.

It is packaged in 4-ounce and 16-ounce bottles.

#### AMERICAN ARSPHENAMINES NOW THE WORLD'S STANDARD

A few years ago there was not a gram of arspenamine made in this country, not a gram. We were abjectly dependent on other countries for our supply of this very important drug.

Now, thanks to the Dermatological Research Laboratories, of Philadelphia, we are in a different and more complacent position. Not only is arspenamine now being made in America in quantity sufficient for all needs, present and future, but the quality is such as the world has never before known. As the result of researches and refinements in the manufacture of the drug, we now have an arspenamine of greatly enhanced effectiveness, along with a greater margin of safety for the patient, than any of the imported drugs afforded.

As for neoarsphenamine, the first supplies of which also came from Europe, the circumstances are much the same. A very superior quality of drug, in fact the best drug known to syphilologists, now comes from the Dermatological Research Laboratories, branch of The Abbott Laboratories, Chicago. It has been endowed by chemists with a trypanocidal activity almost if not quite that of arspenamine, whereas originally the activity of related arsenical was considerably less.

#### TAKE IT EASY

Take it easy,  
Don't get het;  
End o' the road  
's longways yet.

It's a right stiff pull  
In a durn tight place,  
With scource no  
Let up on the trace.

We're hitched up some  
To trouble an' care,  
An' it's bad made wuss  
When we fuss and flare.

Stiddy and slow's  
Sartain an' safe,  
A lot sight better'n  
To fret an' chafe.

Keep to the road  
Thru mud and dust;  
Dont get het,  
Ner don't lose trust.

The end o' the road  
Mayn't be in sight;  
But take it easy,  
The world's all right.

—Victor E. Southworth.

## OFFICERS COUNTY SOCIETIES 1924

County	President	Secretary
Adair	Dorsey P. Chambers, Stilwell	Robt. M. Church, Stilwell
Alfalfa	James Stevenson, Cherokee	H. A. Lile, Cherokee
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Beaver		
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Blaine		
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Choctaw	Thos. Henderson, Ft. Towson	H. H. White, Hugo
Cleveland		
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Comanche	W. J. Mason, Lawton	Thos. R. Lutner, Lawton
Cotton		
Craig	F. M. Adams, Vinita	C. S. Neer, Vinita
Creek	L. H. Starr, Drumright	C. D. Blachly, Drumright
Custer	W. I. Basinger, Butler	C. H. McBurney, Clinton
Dewey		
Ellis		
Garfield	John R. Walker, Enid	D. D. Roberts, Enid
Garvin	C. M. Pratt, Lindsay	J. W. Stephens, Pauls Valley
Grady	A. W. Nunnery, Chickasha	D. S. Downey, Chickasha
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Jackson		
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Kiowa		J. H. Moore, Hobart
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LeFlore	Harrell Hardy, Poteau	Earl Woodson, Poteau
Lincoln	A. M. Marshall, Chandler	C. M. Morgan, Chandler
Logan		
Love		
Major		Elsie L. Specht, Fairview
Marshall		
Mayes		
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McCurtain	A. S. Graydon, Idabel	R. H. Sherrill, Broken Bow
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Seminole		
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NOTE—Corrections and additions to the above list will be cheerfully accepted.

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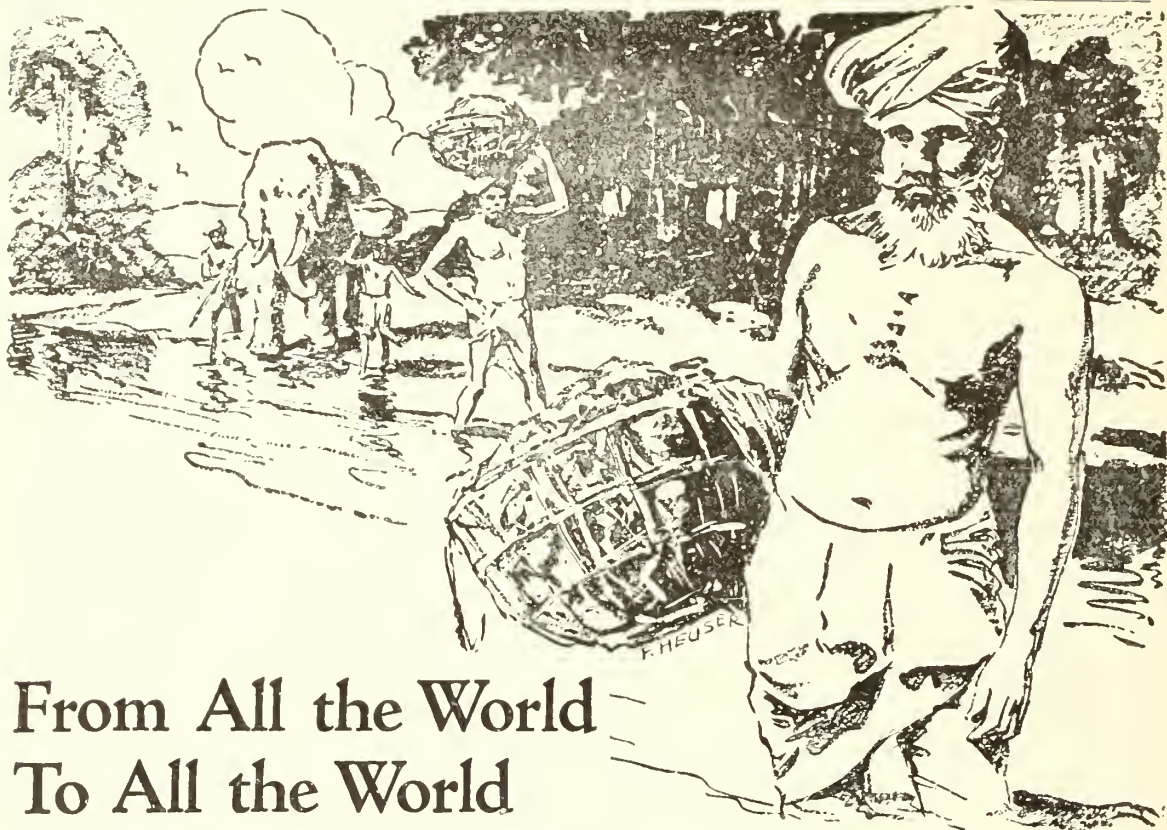
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### REPORT OF CLINICAL FINDING ON A PATHOGENIC PSEUDO GONOCOCCUS\*

REX BOLEND, B.S., M.D.

Associate Professor of Urology, University  
of Oklahoma

The above title should probably have been—some laboratory observations traced through to the clinical findings of a diplococcus, which is not gonococcus, not staphylococcus, not micrococcus catarrhalis but which clinically seems to be pathogenic and capable of producing confusing symptoms with gonorrhea and its complications.

Insurance Companies and domestic tranquility are perhaps responsible for our efforts along these lines, to have an acute prostatitis—or epididymitis develop with negative history and no G. C. or colon bacilli present—to make such report and have insurance company refuse claimant, or question our veracity in regard to diagnosis, is at least disconcerting.

Again numerous times we are called upon to decide in regard to a man or woman who has suspicious symptoms—whether or not the condition is gonorrhea—the whole domestic equilibrium depending on our answer.

With these troublesome questions confronting us an attempt was made to find some further information about this ever present confusing diplococcus.

No time will be taken with case histories—but it is necessary to enumerate some of the conditions which we feel this organism is directly responsible for in these cases. On the following we have eliminated so far as possible by careful history, repeated microscopic examinations, repeated cultures and animal inoculations gonococcus, B. Coli, staphylococcus and catarrhalis.

Epididymitis .....	3
Prostatitis, acute.....	5
Prostatitis, chronic .....	18

Pyelitis .....	10
Pylonephritis .....	2
Salpyngitis .....	4
Urethritis and Trigonitis, in female .....	5

On the remainder of cases reported in this series there was a doubtful history of gonorrhea or nothing other than stubborn urethritis developed—the data for the whole series was obtained from private practice.

#### MORPHOLOGY AND STAINING

The organism is a typical diplococcus with the surfaces facing each other flattened and presenting a characteristic “coffee bean” appearance. Tetrads and larger groups are often noted. The organism is non-motile and does not form spores. Both in direct smears and in cultures a great range in size and shape is common. A methylene blue stain gives a very clear cut picture of large, rounded “coffee bean” diplococci and of much smaller, very slender organisms, all arranged in characteristic form.

Gram's method has never given a constant stain. Some of the organisms will decolorize and be “negative,” others will be faintly decolorized while many will present a typical gram positive picture.

#### CULTIVATION

Culture taken directly from the exudate from the genitals have been successfully cultivated on beef-infusion, agar plus dextrose. Beef infusion agar plus hydrocele or ascitic fluid—blood serum gave a luxuriant growth. Meat extract agar has been used with varying success—in cases where an initial growth has been obtained, it is scanty and hard to keep alive. Growth becomes more luxuriant after cultivation on artificial media and an acid media is best.

On plates, colonies are quite characteristic, the growth presents a white creamy appearance, round, slightly raised in the center, shiny and viscid; they are decidedly similar to the catarrhalis colonies. For a few transplants the growth retains the sticky quality but gradually it becomes smooth and is easily transferred.

In plain broth growth takes place but it is

\*Read before Section on Genito-Urinary, Skin Diseases and Radiology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

not luxuriant. An even clouding occurs and no pellicle forms.

On potato the organism grows but it presents nothing characteristic.

On sugars—dextrose, saccharose, maltose, levulose, galactose, lactose, mannite, growth is rapid and within 24 hours. A marked acid reaction is secured. No gas is produced.

Stab cultures in gelatine show a line of colonies following the direction of the wire but no liquifaction occurs.

Litmus milk gives a slight coagulation with acid production.

Dunham's peptone (D. F. Peptone) gives no indol or reduction of nitrates.

Culturally, the organism does not correspond to any diplococcus described in text books of bacteriology. The above mentioned cultural studies were run on all of the strains and constant reactions were obtained. As controls, several known strains of gonococcus (Torry strains) and of staphylococcus were used and typical reactions were obtained. On sugars, the gonococcus cultures were negative with the exception of dextrose while the unknown organism gave growth with distinct acid production in all sugar media. Staphylococcus cultures liquified gelatin—the unknown culture did not.

#### AGGLUTINATION RESULTS

Negative results from agglutination tests were obtained. The blood serum of patients giving a pure culture from the genitals, did not agglutinate emulsified growth from agar slants in dilutions of 1-20, 1-40, 1-80, 1-160, 1-320. Controls—normal saline and normal horse serum—were negative. The organisms did not agglutinate normal horse serum in dilutions of 1-50, 1-100, 1-200.

#### ANIMAL TESTS

No satisfactory results from animal inoculations have been obtained. Fresh cultures were dropped into the eyes of guinea pigs and rabbit but no reaction occurred. One-half c.c. of fresh emulsion repeatedly failed to kill white mice.

In talking with laboratory workers, it was found that the organism is not a new one. It has been noted by many, sufficient laboratory work was done to prove that it was not gonococcus or any other known pathogen—and there discarded with the important question, still unanswered. By many people, it is accepted as a pseudo-gonococcus, a secondary, non-pathogenic invader, not worthy of further interest or worry. Clinically, however, it is not to be dismissed so easily.

#### SUMMARY

- (1) The organism is not found, normally in genito-urinary tract.
- (2) It is present in a very large percentage of cases secondary to gonorrhea.
- (3) When activated by some other organism or condition is capable of producing the complications commonly attributed to the gonococcus.
- (4) It is not gonococcus, not staphylococcus, not catarrhalis.

I desire at this time to thank Dr. Wann Langston, who made these tests possible—by his hearty co-operation, timely suggestions, and free use of University of Oklahoma—Pathological Laboratory—also his Bacteriologist, Miss Anna Dean DuLaney, who did the major portion of the technical work.

*Discussion:* Dr. Wm. H. Bailey, Oklahoma City.

Dr. Bolend very kindly allowed me to read this paper before it was presented and I have also had the privilege of seeing many of the slides and keeping in touch with this research from time to time.

No true idea can be gotten, unless you have attempted it yourself, of the immense amount of work in trying to prove a scientific point such as this. It is relatively easy to make a scientific observation but it is quite another thing to prove it.

Rosenow has demonstrated pretty conclusively that we do have transmutation of certain types of bacteria. It may be that this organism is a true gonococcus that simply has been changed in its staining properties because of some unfavorable factors in its environment. It will be necessary to carry out this research to its finest detail, to prepare anti-sera and make absorption tests of the various strains isolated. This class of work is the most difficult that we have to do in bacteriology and requires the most careful and exacting technic.

The importance of making a definite clinical diagnosis in these cases can readily be appreciated. Fortunately for the pathologist it does not fall within his province to make this diagnosis from the microscopic examination of a smear alone. Such a laboratory finding is only one symptom of the condition and should not receive more weight than any other symptom.

A chronic stage of a definite gonococcus infection will give us extra-cellular types of organisms with irregular staining properties.

This condition closely simulates the characteristics described for this organism. The Gram's method of staining altho in almost universal use as a method of differential staining has always been found very easily variable in our hands. You occasionally see in text-books, where some organism is being described, the statement that, "some authors claim that this organism is Gram negative," while it has just been called a Gram positive organism. So that too much weight cannot be given to its reaction to Gram's staining.

If Dr. Bolend wishes to stimulate further interest in this organism all he will need to do will be to publish the report of his studies as the discovery of a new coccus infecting the genito-urinary tract, giving it his name, as, "The Pseudo-gonococcus of Bolend," and there will be a flood of work and reports from all over the country trying to prove that this is not a new organism but is this or that coccus reported by such and such a man a certain number of years ago.

Dr. Bolend should receive the thanks of this section for bringing this report to us, as work on any research of this kind is often a thankless job and should be given all the encouragement possible.

#### TREATMENT OF INFLAMMATORY CONDITIONS OF THE SEMINAL VESICLES AND PROSTATE GLAND\*

FRANK J. BAUM, M.D.  
MCALISTER

That there is a right and wrong way to perform prostatic massage is a statement with which the specialists in this section are thoroughly familiar, however, as this treatment is administered by most every physician and so often improperly, I am going to beg the indulgence of you who know so that the proper technic may become known to those who have not familiarized themselves with the subject.

Prostatic massage began attracting popular attention first about thirty years ago when it was adopted by the Royal Institute of Massage at Stockholm and mentioned as a means of treating chronic prostatitis by Posner of Berlin, prior to which time diseases of the prostate were treated by applications to the perineum of counter irritation, heat, cupping, leeches, etc.

The technic of massage has passed through many stages of experimentation. First, the

procedure was to massage around the prostate with a circular rotatory motion of the forefinger, not directly over the gland; later, a Berlin operator made pressure over the soft spots of the gland, leaving the remainder untouched. An external method was to massage the perineum with a stroking and friction movement, also kneading the prostate, the thumb externally on the perineum with the index finger inserted in the rectum supporting the gland.

The most popular and efficient technic of today is about as follows: The patient standing twelve inches from a table, say about thirty inches high, his feet about twelve inches apart, toes markedly adducted, forearms lying flat on the table, with head resting on his hands and back straight. The index finger protected with a rubber glove or finger stall and well lubricated is gently inserted within the rectum and gentle to firm pressure is made with a stroking downward movement toward the opening of the prostatic ducts in the deep urethra, making some three or four strokes over one lobe, treating the other similarly, finally drawing the finger from above downward over the posterior urethra expressing whatever secretion may be obtained from the sinus pocularis and termination of the ejaculatory ducts. This may be continued from one to three or four minutes, depending on the conditions of the gland and may be repeated, if mildly administered, twice or at most three times a week and if vigorous not more than once a week. One can get better effects with gentle massage than when too vigorous and it should not be prolonged to too great a length of time. Instrumental massage of the prostate and vesicles is not generally favored. Bransford Lewis says there is no place for instrumental massage. From my observation and experience I am convinced that in the majority of prostatic conditions we will get more satisfactory results if we have the patient come with a well filled bladder, particularly is this true in massaging the seminal vesicles.

I think too little time and thought is given to the details of carrying out this line of treatment by the average man in this work and practically none by the general man. Massaging or striping of the seminal vesicles should be carried out at the same time as prostatic massage, only in the presence of well defined indications and I prefer the bimanual method in which counter pressure is made with the left hand on the abdomen just above the symphysis pubis.

Many physicians labor under the impression that unless they succeed in expressing

\*Read before Section on Genito-Urinary, Skin Diseases and Radiology, Oklahoma State Medical Association, Annual Meeting, Tulsa, May 15, 16, 17, 1923.

secretions from these glandular structures, they have failed in accomplishing the purpose of massaging.

Some writers state that expression of secretions from glandular structures is least important and that the greatest therapeutic benefit derived from this treatment consists more in stimulating circulation and increasing absorption. The massaging of any part increases the amount and flow of arterial blood, increases the venous outflow, tends to remove cellular debris and in massaging the prostate gland particularly, the effort consists in emptying the pus pockets into the urethra, relieving the engorged blood vessels and lymphatics and stimulating the reparative process by inducing a more liberal supply of fresh blood and lymph to the entire organ; it also strengthens relaxed muscle fibers and stimulates greater cellular activity of secreting surface.

At this point I would like to mention the use of heat as a means of rendering massage more effective. As you all know the local use of heat is often very beneficial in any inflammatory condition and the suggestion strongly appealed to me as a useful adjunct in the treatment of many of our prostatitis, particularly the acutely congested, hypersensitive type, the simple catarrhal form and in some cases of the chronic parenchymatous type.

For the application of heat in these cases, I have a box constructed after a plan of Folsom, of Dallas, as follows: Two feet long, two feet wide and two feet deep, with an ordinary toilet seat opening cut in the lid which is hinged so the lid may be raised when necessary. I have the box wired so that I have two rows of light bulbs, three to the row on each side, making twenty-four in all and so wired that by pulling a plug I can cut out twelve of the lights should the heat be too intense. I am using light bulbs of fifty watts and by test I find that the twenty-four generate a heat of one hundred fifty degrees Fahrenheit. (150 F.) in the box and I allow my patient to sit there twenty or twenty-five minutes prior to massaging. Heat thus applied softens up secretion and by inducing hyperemia helps to get rid of the condition of the gland.

Authorities state there are three types of cases in which massage is said to be the most beneficial, viz: simple catarrhal prostatitis, chronic parenchymatous prostatitis and atonic or atrophic conditions of the prostate and seminal vesicles, also frequently in benign hypertrophy of the prostate massage will

serve to prevent an attack of acute congestion.

Kretchmer has compiled several cases of true calculi expressed from the prostate by massage.

To the general practitioner looking for foci of infection, especially in arthritis and neuralgic disturbances (and I desire to emphasize the importance of not overlooking this much neglected and abused gland in seeking for these various foci of infections) prostatic massage is a procedure of importance. Authorities in this line of work have frequently called attention to the connection between arthritic conditions and dormant gonorrheal or secondary bacterial infections of the prostate gland and seminal vesicles, yet I think too often we attribute many of these disturbances to idiopathic causes when careful and painstaking investigation would bring to light the cause and point out the way to relief for our patient.

In conclusion I wish to state I have purposely omitted mentioning the operative treatment, vasectomy or vasotomy, also the intravenous use of urotropin which is being strongly advocated and which I have used in a few cases with seemingly good results.

Reference: J. A. M. A., October 14, 1922. Geo. F. Farman, Santa Barbara, California.

## TRAUMATIC ABDOMEN\*

I. B. OLDHAM, M.D.  
MUSKOGEE

My reason for presenting this subject is not that I have anything original or anything that I feel may be of particular interest, but just to call to mind some of the every day cases that may come to any of us, that we may have in mind some of the important symptoms and the proper course to pursue.

I shall not include under this head stab wounds or gunshot wounds, but I will attempt to call your attention to some of the obscure injuries to the abdominal viscera resulting from external violence.

The literature is practically nil on this subject, so I shall only attempt to relate some of the conditions that have come under my observation.

The injuries under this subject may be to any of the viscera; the liver, spleen, stomach, intestine or mesentery.

\*Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

Marks of external injury are no guide as to the amount of injury to viscera, as we often find extensive injuries to the viscera with no evidence of injury to the surface of the body.

Cases of injury to the abdominal region should be kept under very careful observation bearing in mind the fact that the symptoms of internal injury may be delayed for several hours, especially when the injury is to some organ other than the intestinal tract.

Rupture of some portion of the intestinal tract causing leakage of intestinal contents into the abdominal cavity will give immediate symptoms similar to those found in rupture from any cause, ruptured appendix, perforating gastric ulcer, ruptured gall bladder or perforating typhoid ulcer, while injury to the liver, spleen or mesentery may, and usually do, evidence symptoms after several hours or until enough hemorrhage has occurred to cause symptoms of hemorrhage or irritation to the peritoneum.

It is well for us to determine as near as possible just what organ in the abdomen is injured before we open the abdomen as it is all important that operations of this character of cases should be shortened to the least time possible.

I will give for what they are worth some of the different symptoms arising from injury to the abdominal organs. In rupture of spleen the symptoms of hemorrhage and shock occur at once with the pain referred to region of spleen and according to Eugene H. Pool, Boston Journal, March 1923, in all injuries to the spleen pain is often referred to the left shoulder region, also the rigidity is more pronounced on the left side, while in injuries to liver the bleeding is usually not so severe, and the shock not so great, and the pain is in upper right abdomen.

The stethoscope is of use in that, in injuries to the intestinal tract we find arrested peristalsis, the rigidity is greater and more constant in intestinal injuries than in injuries to the other viscera, the abdomen presenting a doughy feel with other injuries.

After an operation has been decided upon, some findings on first opening the abdomen will help us to determine just where to search for the injury, if the injury is to the liver we will find free blood stained with bile with no clotting, due to the presence of bile. This should at once direct us to the liver. Of course fecal matter will direct us to the intestinal tract while red blood or clotted blood should indicate hemorrhage either from the spleen or mesentery.

Prompt surgical treatment should be given

in all injuries to the abdomen even where some doubt may exist as to the nature of injury. I would not be understood as recommending reckless interference, but a simple abdomen incision will do no harm and may be the means of saving a life.

In lacerations of the liver approximation with catgut, using care to place the sutures just tight enough to hold the edges of the wound without cutting the tissue and close abdomen without drain, prognosis is good.

In lacerations of the spleen, the prognosis is always bad. According to Pool's article, 51.8 per cent die within one hour from hemorrhage while 84 to 96 per cent of the cases treated conservatively die. He gives as the operation of choice splenectomy with a mortality of 60 per cent.

In all cases where hemorrhage is present, and the injury is not found in the liver or spleen, careful search should be made for injury to the mesentery giving rise to the bleeding.

In ruptured intestines such repair should be done as indicated in the case at hand.

I have four cases to report: two laceration of liver, one rent in mesentery, and one operated and no injury found.

*Case One:* A boy sixteen years old, was run down by a farm wagon the wheels passing over abdomen. Accident occurred about five P. M. After the injury he walked about one-half mile to his home and was out around barn, complained only of slight pain. After retiring for the night, he was awakened about one A. M. with severe pain in abdomen.

The family physician was called and found him in shock. On entering the hospital the next morning, he had recovered from shock, abdomen was slightly rigid and doughy, peristalsis was present which caused us to conclude that the injury was not to the intestine. On opening the abdomen we found abdomen filled with liquid, bile stained blood and no clots, a rent in the lower border of the right lobe of the liver, about four inches long was found, this was sutured with catgut, all blood mopped out and abdomen closed without drainage, recovery without complication.

*Case Two:* Child three years old run over by binder. No external injury. Seen within two hours by physician, was in shock. After giving enema with no result, child was brought to hospital about four hours after injury.

On opening abdomen bile stained liquid blood was found with no clots, a rent in liver about two inches long at the junction of right

and left lobes, this was sutured with catgut, blood mopped out and abdomen closed without drainage. On third morning after operation child was smoking his Dad's pipe and left hospital at end of the week.

*Case Three:* Girl nine years old run down by automobile, wheel passing over abdomen. Was seen by me within half hour and at that time was complaining of considerable pain in abdomen. The abdomen was rigid, some slight abrasions on skin.

She was taken to hospital and after about three hours the pulse became more rapid, abdominal rigidity more marked and temperature 99 c.

On opening abdomen, no injury was found except a rent in the mesentery about one and one-half inches long, which fortunately did not involve the large vessels, however, there was a quantity of red blood and clots present.

The rent was sutured with catgut and abdomen closed without drainage.

*Case Four:* Boy nine years old fell from auto truck, the rear wheel passing over the body.

This boy was seen by me about half hour after accident. He was complaining with severe pain in abdomen, he had expectorated small amount of bright red blood, had slight abrasion on right side of chest, no pain in chest and recovered from shock which was slight.

Abdomen was rigid from start, pain on pressure over upper right abdomen. X-Ray found chest negative.

With the absence of chest symptoms and the rigid abdomen pain, operation was decided upon for supposed abdominal injury.

On opening abdomen nothing was found, abdomen closed. On second day after operation there was considerable blood expectorated. Aside from the blood no other chest symptoms developed. The boy recovered rapidly.

This case is reported to illustrate the similarity of the symptoms, especially in children, of abdominal and chest injuries. The abdominal rigidity is often present and pain is more often referred to the abdomen than to the chest. This also is true in pneumonia in children, which is oftentimes mistaken for acute appendicitis.

I quote from an article by C. Fremont Vale, J. A. M. A., Feb. 3, 1923. "A SIGN IN ABDOMINAL RIGIDITY."

"Rigidity of the abdominal muscles, mo-

mentarily relaxing at the end of expiration, points to an intrathoracic lesion. When the lesion is intraperitoneal, the rigidity is usually constant. This type of abdominal rigidity is particularly marked in traumatic chest conditions."

Had I seen this article before and had observed this, the last case probably would have been correctly diagnosed before operation.

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*Discussion:* P. P. NESBITT, M.D., MUSKOGEE.

In discussing this subject I wish to make some further remarks about one phase of the traumatic abdomen, that is, injuries to the gastro-intestinal tract. Rupture of some portion of the gastro-intestinal tract is the most frequent serious intra-abdominal injury from external violence.

The most frequent manner of the infliction of these injuries is for the viscus to be compressed with crushing violence against the vertebral column or the ilium, however, if the viscus is full it is not necessary that it be compressed against a bony structure, especially if the violence is a sharp blow, such as the kick of a horse.

Owing to its thick walls we sometimes have an incomplete rupture of the stomach. The mucosa and even the muscular coats may be ruptured and the serous coat remain intact. The injured person may vomit blood in varying amounts and for a variable length of time, but on operation no leakage is found, and if not operated peritonitis does not develop. With complete rupture of the stomach with escape of gastric contents into the peritoneal cavity peritonitis follows, but as a rule it is not as virulent nor as rapidly progressing as that following rupture of the lower intestines.

If the intestine is full at the point of rupture there is immediate leakage with rapid developing peritonitis. But if the viscus is empty at the point of rupture there may be surprisingly few immediate symptoms of severe injury. This was explained by Nicholas Senn as being due to the contraction of the muscular coats for several inches above and below the point of injury, thus preventing leakage until the muscles were exhausted and peristalsis forced the intestinal contents to the point of rupture and leakage occurred. Such cases may go for twenty-four hours or more from the time of injury until serious symptoms begin to develop.

The early symptoms of serious intra-abdominal injury are varied and none of them

constant, making a definite diagnosis often impossible to make in time to save the life of the patient, as the mortality rate rises very rapidly with the increase of the time intervening from the time of injury to the time of operation. Of the various symptoms perhaps the most reliable are continuously increasing pulse rate, and persistence of pain for six hours or more. However, we should not delay operation waiting for any one symptom, or group of symptoms to develop. This being the case we must oft times urge operation on suspicion only. To prevent later legal trouble we should make it a rule to acquaint the patient of this and to have reliable witnesses to the fact that he so understands it.

The important things in operative procedures in rupture of the stomach or intestines are, early operation, repair of the injury, and adequate drainage. This should always include a supra-pubic drain to the bottom of the recto-vesical pouch, and keeping the patient in the Fowler position. If the injury is very extensive and the condition of the patient bad, the suture of the injured intestine to the abdominal wall forming an intestinal fistula is advisable as a temporary measure.

Full doses of morphin given after a diagnosis is made is a life saving measure to tide the patient over until he can be brought to operation, but if given before a diagnosis is made or line of treatment is decided upon it will mask the symptoms and often give patient and doctor a false sense of security until it is too late to save life.

### INFLUENZA: SOME OF THE MANY COMPLICATIONS\*

H. M. WILLIAMS, M.D.  
OKLAHOMA CITY

The subject matter of this paper embodies a broad field for consideration. In presenting it, we can only consider some of the more practical phases and leave to your consideration for more detailed discussion. Endless research by competent men in the medical profession in most every department of medicine, has been made on this subject during the last few years but as yet, we are practically unable to cast any real light upon the subject as to the cause and epidemiology of this wide-spread and most fatal of diseases that was not possessed by our predecessors.

During the recent epidemic, a considerable data was collected which leads to a more

thorough understanding of some of the many complications of influenza, some of which we will briefly consider including the opinions of some of our ablest writers on this subject adding a few of the writer's personal observations.

In considering the subject of influenza, we are dealing with an epidemic disease—one that we do not come in contact with in the more severe types except at intervals of approximately twenty or more years time. Though a disease that has been known to the medical profession for a considerable period of time, there has been but very little written on the subject until quite recent years.

Dr. H. A. Freund, in speaking on this subject, states as follows:

"At no time in the history of a great epidemic was there a better opportunity for studying the cause, the mode of transmission and the epidemiology of influenza than during the recent outbreak. By modern means of scientific investigation, by recruits in camps, individuals making personal sacrifices in groups, boards of health, and departments of both Army and Navy, an unusual opportunity was given for investigation, but additional knowledge acquired in respect to this disease is of negative character."

To those of us who have observed influenza, it is a generally accepted theory that whatever the invading agent may be, it breaks down the bodily defense and permits the growth of other pathogenic bacteria, from which arise so many complications that are common to influenza. A few of these we will briefly consider.

In the opinion of the writer, there are but a small percent of cases of influenza but that may be considered under some of the many subdivisions of the complications of this disease. For the purpose of our discussion, we shall for convenience consider the complications in the following order:

1. Respiratory:
  - (a) Pneumonia.
  - (b) Bronchitis.
  - (c) Pleurisy.
  - (d) Empyema.
  - (e) Tuberculosis.
2. Nasopharyngeal and accessory sinuses:
  - (a) Mucus membrane of throat including tonsils and pharynx.
  - (b) Otitis Media.
  - (c) Mastoiditis. (Involvement of the Mastoid.)
3. Gastro-Intestinal.
4. Nervous complications.
5. Heart.
6. Kidneys.

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

During the 1918 epidemic, the usual complications found, were those involving the respiratory tract, which in many instances resulted in pneumonia, the bronchial form being the most frequent type. To determine whether pneumonia or a common cold is the complication is not at all times an easy matter, as there is no definite line of demarcation; many of the symptoms are similar to ordinary colds. The mucus membrane of the respiratory tract is inflamed and a considerable mucus is to be found at times in the bronchi.

Bacteriological findings show the presence of the pneumococcus in common colds (in some localities) and also the presence of pneumococcus in influenza in a number of apparently uncomplicated cases.

Gordon (*Journal of Infectious Diseases*, November, 1921) after having made a careful study of this subject, states as follows:

"While the pneumococcus is observed in the various simple inflammations of the upper respiratory mucus membrane somewhat more frequent in throats that do not show lesions and there is no increase in percentage as to region involved other than that which involves the bronchial region. And further, that patients suffering with influenza show that there is a slight increase in presence of the pneumococcus over common colds."

Experiments carried out by many other investigators contend, that as to frequency of pneumococcus in influenza and common colds, it may run different as to locality but results are practically the same. At the onset of the recent epidemic, about twenty-five percent of all cases of influenza had pneumonia as a complication. We are not able to give accurate data, at this particular time, but we are of the opinion that pneumonia, as a complication, has, during the last two or three years, been greatly reduced. However, it might be reasonable to expect pneumonia as one of the frequent complications when we consider the fertile field for its development presented by the inflammatory condition of the mucus membrane of the respiratory tract, together with the low resisting powers of the patient to all invading organisms at this time. While most epidemics have made their appearance in early fall, yet they have continued up until late winter, the season in which the pneumococcus is most active.

Bronchitis may be a complication. This is especially true when there is an involvement of the bronchi, extending from the trachea, and may be determined from pneumonia, by the absence of the characteristics, pneumonia

breathing, and spots of consolidation area that may be outlined in the latter.

Pleurisy, if encountered, may occur as a complication to or following pneumonia and when present, will present a definite localized pain and excruciating on deep breathing, together with friction of the pleural cavity upon exhalation and inhalation.

Empyema is encountered as a sequel to pneumonia. Many writers are of the opinion that this condition, as a complication, is more frequent following the influenza type, than in type of pneumonia unaccompanied with influenza.

Tuberculosis: In many instances where it was thought to have been set up as a result of influenza, proved to be a pneumonia condition delayed in clearing up. Though many cases of arrested tuberculosis became active, for a period, it is doubtful if there are any more active cases of tuberculosis now than previous to the recent epidemic. The writer's limited observations, in this respect, are that, rarely, patients suffering with active tuberculosis were attacked with influenza during this epidemic. This might be due to isolation of this class of patients.

It has been observed in pneumonia, pleurisy and empyema, as a complication to influenza, in nearly all instances the streptococcus bacillus predominated.

Nasopharyngeal and accessory sinuses. Laryngitis is one of the most frequent complications met with in influenza. In fact, it is our opinion that this condition is always present in a more or less marked degree. This may be a contributing cause of the initial cough that so often accompanies this disease.

This involvement may extend to the pharynx and trachea, resulting in the involvement of the mucus membrane of the trachea which produces a hoarseness and difficult breathing like that of diphtheria and sometimes difficult to determine from that disease.

Tonsils may be involved, especially so if they have been previously infected. Otitis Media, both as a complication and sequel, is very common. The presence of the inflamed mucus membrane of the throat extends along the route of the eustachian tube setting up an otitis media—a condition that the writer has often met during the latter months of the recent epidemic. The involvement of the mastoid is a common occurrence and the otologist has had to be consulted at frequent intervals relative to the latter condition and many cases of this type

have proven serious.

Gastro-intestinal complications may arise. The epidemic of 1889-92 is spoken of by many writers as being one that involved the gastro-intestinal tract. During the great epidemic that occurred in 1918, and which has extended to the present time, the writer having observed a large number of cases, was unable to find gastro-intestinal disturbances, as a complication, to any greater extent than any ordinary febrile disturbances might cause.

Neurosis is not an uncommon complication and was said to be most manifested in the 1889 epidemic. During the recent epidemic, it has proven to be a sequel to a number of cases, especially those of a neurotic tendency.

The heart does not, as a rule, suffer a complication to any considerable extent. A disturbance of the nervous mechanism of the heart is not uncommon. Also a pericarditis and myocarditis are sometimes observed.

Kidneys are rarely involved other than a slight febrile disturbance.

Other unexpected and unusual complications may arise or previously lesions that have been unobserved may make their appearance at this time, and yet not be a complication due to influenza.

It has been almost five years since the last great epidemic of influenza and yet every winter since then, we have had outbreaks of importance in almost every locality. However, they have not been so sweeping as the initiative, but yet of unusual consequence. Writers on this subject are of the opinion that it is the same as the previous epidemic called influenza though the symptomology, complications, and age of those suffering the greater mortality have been different in many respects. As previously stated, the 1889 epidemic affected the gastro-intestinal tract and the greater mortality was among the aged. But in the recent epidemic, the most common complication was in the respiratory tract and the greatest mortality was among the younger and young adult life.

From the above, together with observations from personal contact with influenza during the past five years, we have made the following observations:

1. That influenza is a disease of many complications.
2. That not infrequently common colds and various throat complications are confused with influenza.
3. That the nasopharynx and accessory sinuses are to a more or less degree involved

in the majority of cases.

4. That bronchial or lobar pneumonia is a complication in about twenty-five percent of all cases.

5. That whatever the invading organism, in many cases it affects the patient as to the course of disease and symptoms as a general septicemia.

As a result of this low resistance to bacteria invasion, we find in this type of patients an unusually fertile field for their growth. We have further observed that some families or individuals possess a poor resisting power against certain complications.

In a recent outbreak of influenza in a family of eight, all were affected including parents. Four members of this family developed an otitis media, the father being one of the four to develop this condition. While in others, all developed laryngitis, well defined.

Again you will find entire families with the respiratory tract involved, to a more or less degree, including bronchi and lungs.

Would it not be a fair conclusion that influenza, in some measure at least, spends its force upon the vital organ of the individual's weakness. That different individuals or families possess different resisting powers to the same micro-organism. In influenza, there is liable to be one or more complications and they may spend their force upon any organ of the body.

For the treatment of influenza, there is nothing definite to suggest further than systematically dealing with the complications that may arise. Serology offers but little, if any, aid. The laryngologist and otcologist, we have frequent occasion to use, as both ears and throat are often involved—the throat at onset, and ears either during the attack or as a sequel.

*Discussion:* CARL PUCKETT, M.D., PRIOR.

The doctor has very thoroughly covered the field and I consider it a very valuable paper. We should have had it to read about the beginning of the recent epidemic in January, this year. It seems that for the last few years influenza is like the poor—always with us, and for that reason new studies and reviewing of what we know about it is certainly in order.

As to the percentage of complications I feel that they should be taken from the epidemics of 1920 and 1923, or a mean percentage should be taken of these two epidemics and the most serious one of the fall of 1918 for the one during war time was of more than average severity.

In Mayes County for the first four months of this year (1923) 1672 cases of influenza were reported and 200 cases of pneumonia. About the same ratio prevailed in the early 1920 epidemic. Probably eighty per cent of the pneumonias followed or complicated influenza which would mean 160 cases or about a 10 per cent complication as contrasted to the 25 per cent as suggested by the paper.

In regard to the other complications mentioned in the article I agree with the author that they occur quite frequently; also, that most anything else might happen to a fellow that has influenza. In other words these army of germs are cowards, for influenza puts a man down for the count, and all other lurking hyenas of bacterial life pounce on him and the only way he can clean up on them is to have the underlying constitution to do it. Other complications I would lay stress on are those of the ear, heart and kidneys. In my experience otitis media is quite common and because of the great prostration due to the disease heals slowly with the consequent danger of serious permanent injury. The heart complications are sometimes very disturbing and may be serious. Endocarditis and pericarditis may be present and accounts for the disturbed mechanism of the heart. The kidneys need to be watched on account of the great toxemia of the disease for it puts a strain on them that is hard to bear.

I had a case of empyema this spring from just plain influenza, at least that is what it seemed to me. Also, had one case of encephalitis following influenza, terminating fatally.

The doctor has given us much information on a subject we should study more and therefore has rendered real service. It has become so common that we sometimes overlook its seriousness and anything that imparts knowledge and stimulates a desire for knowledge is the real thing.

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#### PROCEEDINGS OF THE UNIVERSITY HOSPITAL CLINICAL SOCIETY

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DR. HORACE REED, OKLAHOMA CITY: A case of stone in the right ureter.

Patient, male, age 33, coal miner, admitted to the hospital on stretcher 11-15-23. Chief complaint was acute, sharp, lancinating pain in right lower abdomen with radiation to small of back and right thigh. Because of pain he kept his right thigh flexed on abdomen. He also complained of being chilly and was very nervous. He claims to have had pain in right side of abdomen while in army service but he does not know whether definite

diagnosis of cause was made. For about nine months his present trouble has been almost continuous. He has had radiation of pain into right testicle. During part of the time pain has been paroxysmal. For nine months he has been totally incapacitated for performing manual labor. Four months ago he had appendix removed but he experienced no relief from pain. He thinks that his condition since then, if changed, has been worse.

Admitting diagnosis: Stone in right ureter. The diagnosis was confirmed by x-ray which revealed a shadow as of a calculus in the lower end of the ureter, perhaps engaged in the bladder wall.

Urological consultation was requested for the purpose of determining whether removal of stone through intra-vesical instrumentation was feasible. Consultation was answered by Dr. Rex Bolend. Cystoscopy revealed no evidence of stone in bladder or ureteral orifice. Catheters passed easily to each kidney pelvis. X-rays with catheters in situ revealed stone dislodged from former position and lying on the brim of the pelvis. Another x-ray three days later showed that stone had descended about an inch. Following cystoscopy the urine was slightly blood tinged. He had a chill immediately following cystoscopy and his temperature ranged from normal to 103 at the highest point during the next four days. Pain was less but signs of infection increased. He had had slight elevation of temperature before cystoscopy and there was no doubt that the urinary tract was infected prior to instrumentation.

He came to surgery 11-26-23 with a temperature of 102.8. He had very decided tenderness over right kidney with relative rigidity of muscles of right loin.

Operation: Three and one half inch oblique incision centering opposite the anterior superior spine of right ileum and one inch medial to this point. The aponeurosis of external oblique and the internal oblique and transversalis muscles were split in direction of their fibres. The opening was enlarged by extending across the linea semilunaris, splitting the anterior sheath of rectus abdominalis. The latter muscle was retracted toward the midline. The peritoneum was separated from lateral and posterior wall of abdomen well toward the mid-line. This uncovered the common iliac vessels of the right side. The ureter is firmly attached to the peritoneum and separates with the peritoneum from the wall of the abdomen. Without disturbing this relation with the peritoneum the ureter was transfixed with two silk strands for re-

tractors between which the ureter was incised in longitudinal direction. An eight-inch narrow alligator forcep was passed toward the bladder until impact with the calculus was felt. The stone was grasped with the bite of forceps and recovered with one attempt. Two fine catgut sutures closed the ureteral incision. These structures were placed external to the lining membrane of the ureter. A small soft rubber tube was placed so as to come near, but not in contact with the ureter and the incision closed as in an appendectomy.

The patient's temperature remained high for 24 hours, after which it fell rapidly and reached normal after about four days, where it has remained practically stationary up to the present. There was a small amount of drainage, mostly serum with perhaps a little urine for a few days. The tube was removed at the end of one week. The wound promptly healed. The patient is now free from pain and has no further signs of urinary disturbance.

*Comment:* Most ureteral calculi will pass spontaneously. Some will lodge in narrow portions of the ureter and then passage may be facilitated by intra-ureteral instrumentation. Various methods are employed through the operating cystoscope for this purpose. But experience has shown that intravesical intra-ureteral instrumentation are hazardous in the presence of acute infection of the urinary tract. This patient had had obstructive signs extending back for at least nine months. He had evidences of infection, and it might be said, with reasons for suspecting a beginning degeneration in the right kidney at time of admission to the hospital. Ureteral catheterization without any other active manipulation caused a marked reaction. Further intravesical instrumentation was clearly contra-indicated. Removal of the calculus was an urgent necessity. Extra-peritoneal route, as above described, offered a sure, safe, and quick method of meeting the necessity. In other words this was clearly a case for general surgery rather than the urological specialist.

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*Discussion:* DR. REX BOLEND.

This case clinically is typical of stone in the lower part of the ureter. Our excuse for ureteral catheterization was to prove conclusively the diagnosis, ascertain the exact location, and determine if possible the feasibility of removing intravesically.

The x-ray with shadowgraph catheter in situ revealed the stone apparently pushed up the ureter slightly from the position in first picture. The distance might be very little due to the position of the tube in making the exposure.

Dr. Brascch says that 65 to 70 per cent of ureteral stones will pass unaided in three to six months.

Ninety-five per cent of stones that have entered and reached the lower third of the ureter can be removed by manipulation such as injection of oil or glycerine above the stone, after having enlarged the ureteral orifice by clipping or dilating with increasing sizes of U. C.

The exact location and size of the stone is very important. It is necessary to remember that there are three natural constrictions of the ureter. First, just after leaving the kidney. Second, as it crosses the large vessels. Third on entering the bladder wall. A stone lodged at any of these places of course will require some dilatation of the ureter before we can expect it to continue in its descent. Also after having gradually dilated the ureter much better results may be expected if it is possible to pass the stone with the catheter and inject the oil or glycerine above. Thus the weight of the liquid is added to the lubrication and dilatation.

So much success has followed this procedure (many urologists reporting as high as 95 per cent to 98 per cent) that the open operation should be resorted to only after repeated attempts at intravesical removal have failed.

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*Case II:* A Case of Carbuncle of the Back of the Neck. Patient, white, male, age 50. Occupation farmer. Entered the hospital on 12-7-23 with an extensive destructive process involving the back of his neck. This began two weeks previously in the form of a boil. This was "lanced." Immediately several boils formed around the primary lesion, and the process rapidly spread. Treatment had been poultices and incisions.

There was no cessation of pain. The patient has had no surcease from intense suffering from the very beginning. His appearance was haggard and wan. He was extremely septic. Temperature on admission 98. White blood count, 18900, with 95 per cent polymorphynuclears. Urine was free from sugar but contained trace of albumin and hyaline casts. The area of involvement on back of neck was about three and one-half

by five inches. The skin over at least half of this area was visibly necrotic. A muddy thin discharge oozed from numerous small openings.

*Operation:* Under general (ether) anaesthetic, removal of all necrotic tissue by scalpel, scissors and curette was undertaken. Bleeding was very free at first but soon checked spontaneously. Areas of skin involved that showed any signs of vitality were preserved. A few days later another anaesthetic was given and most of these areas, which had become necrotic subsequent to the first operation, were removed. After the first operation the patient's condition was much improved although he still had some pain. After the second operation at which time all devitalized tissue was removed he has been entirely relieved. The dressings have been done once daily by packing the large defect loosely with iodoform gauze. Granulations are now springing up over the entire area. Skin grafting will probably be required before the defect is entirely covered over.

*Comment:* This case is presented mainly to show what usually takes place whenever a carbuncle is not given proper attention in its early stages. The proper treatment for carbuncle is excision and no incision. I prefer to remove a carbuncle by means of double elliptical incision. These incisions are carried down to the aponeuroses outside the area of the carbuncle, one on either side. Everything between these incisions is removed in one mass. The wound thus made may be partially (or even completely) sutured or packed loosely with iodoform gauze and left to granulate. Relief from suffering is instantaneous and complete. There are different methods advocated for excision than the one just described. I have not employed any of the other methods.

Let me emphasize in closing that carbuncle is a lesion which urgently demands early treatment and that the treatment is total eradication and destruction. The morbidity by such treatment is three weeks or less as compared to three months or longer, or even loss of life when managed "expectantly."

DR. LEROY LONG: It is an interesting fact that the average carbuncle is produced by the same organism that produces the average furuncle. Both carbuncle and furuncle are produced in the majority of cases by the staphylococcus aureus. In both cases the infecting organism enters by way of a hair follicle or sebaceous gland, producing an inflammatory

process of the true skin and subcutaneous tissues. In one case a furuncle may be produced, in another a carbuncle, the production of the one or the other depending upon, first, the resisting power of the individual and, second, the locality of the body in which the infection takes place.

The most important of these determining factors is the resisting power of the individual. In the young and robust the resisting power is high, and a furuncle is produced. In the old and debilitated the same infection may produce a carbuncle.

The back of the neck is the site of a large percentage of carbuncles on account of certain anatomical peculiarities. In this region the skin presents diverging columns of fat (columnae adiposae), these being in close relation with the hair follicles. Pus finds its way from one of these columns to another, thus spreading over a wide area, and finally producing the multiple foci of necrosis characteristic of carbuncle.

The plan of excising the entire area is a good plan if the patient is seen early, but, unfortunately, most of these patients come to the surgeon after there is widespread involvement and marked disintegration of the tissues. In that case, it would seem safer to make crucial incisions, being careful to not go beyond the area of active infection. The angles made by the crossing of the incisions are raised up and cut off, after which hot fomentations are employed. In the occasional case, practically all the necrotic area may be removed by blunt dissection with little or no bleeding, and when this can be done it would seem to be the proper procedure. The point I wish to make is this: It is a dangerous thing to invade sound tissue except in those cases in which it is possible to remove the entire infected area. When this cannot be done it is, in my judgment, far safer to carry out the conservative procedure that I have just indicated.

I wish to call attention to the extreme danger in connection with carbuncle on the face and especially about the upper lip and alae of the nose. In this locality there is a strong possibility of septic phlebitis through which infected emboli may be carried to the brain and other important structures. When we consider the fact that facial carbuncle carries the tremendous mortality of 50 per cent, its extreme danger is understood, and the necessity for early radical operation, if possible, is emphasized, even regardless of resulting deformities.

CLINICAL SOCIETY, ST. ANTHONY'S  
HOSPITAL  
OKLAHOMA CITY

*RESUME OF COLLEGE OF ANESTHETISTS  
HELD AT CHICAGO, OCTOBER  
1923.*

DR. R. S. MACCABE.

The success of surgery depends largely upon the anesthesia. Many new ideas were given at the recent College of Anesthetists held in Chicago last October. I shall only attempt briefly to give you a few of them and ask you to observe and report on them as you will.

One of the most important things to remember is that the success of the anesthetic depends upon the preparation of the patient such as:

(1) Rest is very important in all cases and especially so in all heart complications or septic processes. The patient should be in the hospital for a few days prior to operation if possible.

(2) Body fluids should be kept up to point of tissue saturation.

(3) Body heat maintained.

(4) The operating room should be between seventy and eighty degrees Fahrenheit.

(5) A large operating pad from four to six inches thick should be on the table.

It was shown by Dr. Barbour that patients to whom a preliminary intravenous injection of 3 per cent dexamaltose solution was given maintained a more normal body heat during and after anesthesia. He explained that all anesthetics produced a dehydration of tissues and the use of the dexamaltose solution overcame this to a great extent. The patients had less vomiting afterwards.

Dr. Souther states that he noticed there was less complication following anesthetics given during the Spring and Fall due to the increase of humidity and advises against anesthesia given during extremely hot weather.

ETHER ANESTHESIA

To me it is quite surprising to learn that ether acts as a heart depressant, but Dr. Dooley of Syracuse University experimented on animals by giving ether in normal saline solution through the carotid artery. Even after he had severed the vagus nerves he

found that after giving it to the animal there was a distinct fall in blood pressure and an increase in the respiration.

Dr. Kruse studied the metabolism of animals during ether anesthesia and found that it was reduced varying according to depth of anesthesia. Not all the oxygen was converted into carbon dioxide but was used in the oxidation of the body. He also studied the concentration of the ether given and found that it was important to give it greater than from 7-16 per cent with the mask. At this point all reflexes were gone. The average for a male person was 6 per cent and a female was 3 per cent. Henderson injected air into the abdominal cavity of animals and after a prolonged anesthesia he withdrew the air and found it to contain only 4 per cent ether. This, he thinks, is the blood concentration. Dr. Berges showed that patients to whom ether was given by bubbling oxygen through the ether maintained the normal calories better than those to whom air was used.

NITROUS OXIDE

Dr. Green of Missouri University has experimented with the use of nitrous oxide in his studies of physiology. He states that the nitrous oxide yields oxygen to the blood. Hence it is the anesthetic of choice as it has no protoplasm effect and is non-injurious. He found that the blood oxygen varies from .9-20, 6 per cent according to depth of anesthesia, but from 8 per cent-12 per cent is the most comfortable stage to maintain. Dr. Mennell of London, has tried giving various infusions intravenously for anaesthesia. His first was with the use of a 5 per cent mixture of ether in normal saline, but found that it depended greatly upon the free use of premedical administration of morphine and scopolamine. This, however, he found to be contra-indicated in all brain surgery. Another one was the use of 5 per cent solution of bertonial in normal saline. It was given in the median vein at the rate of 100 cc. per minute. Usually after 400 c.c. were given anesthesia was produced and he continued at the rate of 60 c.c. per minute throughout the operation. In sixty cases he used a 10 per cent alcohol solution in normal saline and found it very satisfactory. He especially recommends in all brain surgery the giving of ether and oxygen by the intra-tracheal method, but cautions the practice of taking frequent readings of the blood pressure in all kinds of anesthesia, as by its use frequently a fall in blood pressure will warn the operator of impending danger sometimes as long as ten minutes before physical signs make their appearance.

## ETHYLENE

One of the most interesting subjects introduced was that of ethylene. This, as you know, was experimented and perfected at the Chicago University of Dr. Lockhart. It was prepared formerly by the action of ethyl alcohol on sulphuric acid, but later perfected by the action of ethyl alcohol on orthophosphoric acid. Hence it is to be considered as dehydrated ethyl-alcohol. After having experimented on frogs, mice, rats, pigeons, he found that when it was given in as high concentration as 80 per cent-90 per cent with oxygen, anesthesia was produced and the animal recovered in from three to five minutes without any after affects. So it was later tried at the Presbyterian Hospital by Dr. Herbs and associates on humans for various operations. They found that when given in mixtures of from 80 per cent to 90 per cent with oxygen, anesthesia was produced in half the time necessary for the use of nitrous oxide. The patient remained pink and had relaxation as if ether had been given.

Vomiting occurred in two per cent of the cases and after five minutes the patients were awake and with their minds clear. Very few suffered from gas pains following its prolonged use.

The study of its physiological effects are worth notice. By its permitting the use of oxygen in larger volumes than with nitrous oxide, the patient maintains a pink rosy color. The respirations are slower but deeper. The skin is dry to moist. The spectroscopic examination of blood failed to reveal any characteristic absorption band resulting from the possible union of unsaturated ethylene with the hemoglobin. No effect was found on the kidneys after its use. No effects on the blood pressure were noted after anesthesia. Failure was noted in about one per cent of the cases. Even ether did not smooth these anesthetics.

Some of the advantages quoted by Luckhart.

(1) Deep surgical anesthesia can be rapidly induced by ethylene without any sense of asphyxia, but on the contrary with a sense of well being and comfort.

(2) Analgesia comes on early, apparently long before complete surgical anesthesia is established.

(3) At a time when there is complete muscular flaccidity, the pulse rate is slightly decreased, if changed at all; respirations are slow but regular, and the countenance normal in color for the individual, or slightly paler.

No cyanosis was ever observed. No subject ever showed any sign even suggestive of asphyxia.

(4) The induction of anesthesia was in no way unpleasant except possibly for the first few inhalations of the concentrated gas, which induced reflex swallowing. A period of excitement characterized by laughing or forced movement preceded the anesthesia in some; in others, such signs were absent during induction, but were in evidence as the person recovered from the anesthesia.

(5) Recovery from the anesthesia was always rapid on withdrawal of the gas mixture. In all, slight weakness and a sense of fatigue was experienced if the person arose from the couch almost immediately on waking up. Vomiting occurred in one early during recovery. In some slight epigastric distress was experienced temporarily. In others, a slight nausea persisted for several hours after the administration of the gas. In none was the nausea so pronounced or so prolonged as to interfere with the ingestion of the next meal.

The objections are:

(1) It is inflammable in mixtures of 96 parts air and should not be used in the presence of a flame or an electrical spark.

(2) The expense is about the same as that of nitrous oxide. The tanks are the same as nitrous oxide but the pressure is only about half the same. Hence the volume is reduced accordingly.

As to the tanks being again used for nitrous oxide, I understand it only needs to be washed thoroughly and either gas can be inserted without harm.

Ethylene is administered about the same as nitrous oxide. Anesthesia is first started by giving the patient straight oxygen for the first few inhalations. This is to gain the confidence of the patient and saturate the blood with oxygen, then the ethylene is gradually added until a mixture of 80 per cent ethylene and 20 per cent oxygen is reached. After a few inhalations the oxygen is reduced to about 15 per cent and this mixture continued, varying as necessary according to the patient's condition. Never use any preliminary drugs as morphine or scopolamine, but after the operation it may be given if necessary to relieve pain.

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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Local news of possible interest to the medical profession,  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
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should patronize our advertisers in preference to others as a  
matter of fair reciprocity.

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### EDITORIAL

#### SOCIETY MEMBERSHIP A THING OF VALUE

It is slowly dawning on the minds of cer-  
tain men and localities of our state that mem-  
bership in a medical society is a thing of real  
tangible value, not to be overlooked, or to  
use the vernacular, "sneezed at" upon occa-  
sion. This state of mind has been brought  
about by many factors, but at the head  
stands medical defense, then, trailing off are  
many others not necessary to enumerate. In  
this connection we wish again to call atten-  
tion to one thing which has apparently been  
overlooked. That is that by the flimsiest

pretext a member may be deprived of mem-  
bership for any reason from the fact that he  
cuts his hair not to suit to local gentry or  
commits offences of the most grievous im-  
port. In either event the constitution and  
by-laws of the county, state and American  
Medical Associations provide plain, explicit,  
easily understood methods of procedure, all  
of which must be followed if the member  
happens to be cast in pugnacious or similar  
mould. We have had a great deal of trouble  
lately over the time-worn maneuver of the  
county secretary, "upon motion duly record-  
ed" wherein the members' dues are simply  
returned, sometimes with, often without ex-  
planation; neither attitude, however, availing  
if the member so wronged appeals to the  
higher body for a hearing.

It should be understood that none of these  
actions affect the members rights in the  
slightest. In more than one case courts have  
redressed these matters, and not to the credit  
of the society either. Our laws provide for  
the disciplining of any member by the bring-  
ing of charges against him, regardless of  
where he may be when the alleged act is com-  
mitted. This arrangement especially takes  
into consideration those members who, remov-  
ing from the jurisdiction of their county so-  
cieties, go to some other county and there  
commit some alleged offense. These may be  
tried by the county taking cognizance of the  
matter exactly as if the member were tried  
by his home society.

#### STATE MEDICAL MEETING

Oklahoma City, May 13, 14, 15

##### COMMITTEES:

General Chairman..... Dr. W. H. Miles

##### Clinics:

Dr. Warrn Langston ..... Chairman

##### Committee on Meeting Places:

Dr. E. P. Allen ..... Chairman

##### Committee on Registration, Badges and Information:

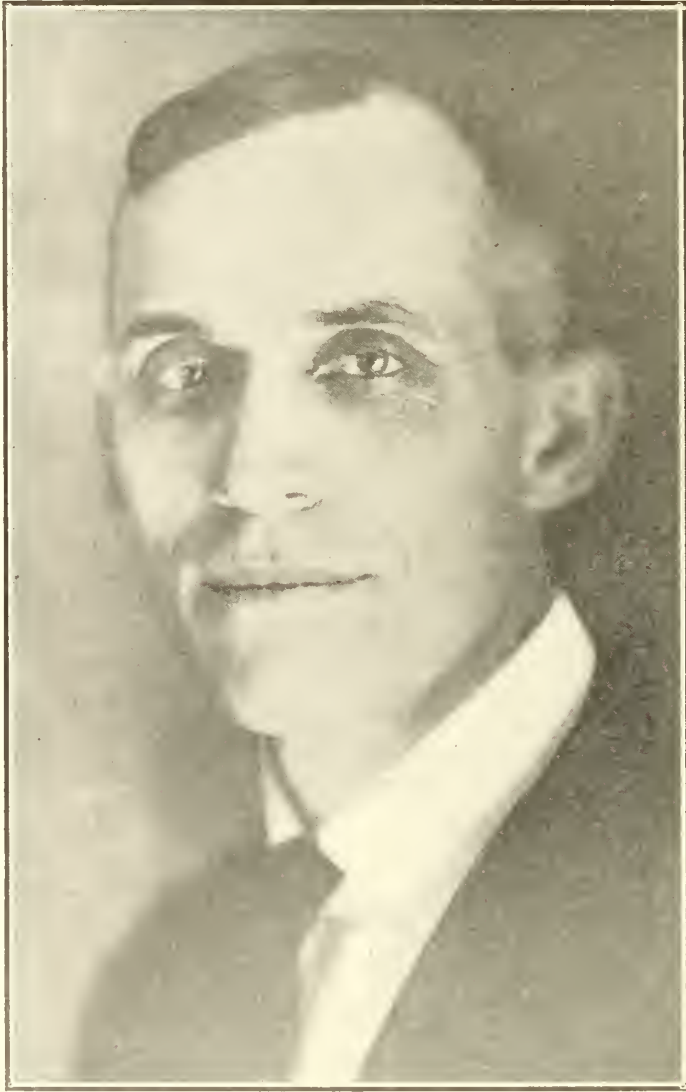
Dr. Carroll M. Pounders ..... Chairman

##### Committee on Finances:

Dr. W. W. Wells..... Chairman

##### Committee on Enrollment:

Dr. S. E. Frierson ..... Chairman



DOCTOR CARL PUCKETT

State Commissioner of Health, Oklahoma, born October 31, 1882, at Rogers, Arkansas. Educated in the Public Schools, and Rogers Academy, and graduated in medicine from the St. Louis College of Physicians and Surgeons. Located at Pryor, I. T., and practiced there until the present time. County Superintendent of Health for 9 years for Mayes County.

"I am expecting the hearty co-operation of all physicians, as I need their help in making this Department what it should be. We are expecting reports on all infectious or reportable diseases, and births and deaths as required by our regulations and laws. To make Oklahoma recognized by the U. S. P. H. S., or rather a part of the United States, so far as these statistics are concerned, physicians must do their duty in making these reports and rendering all other service required, or more, as good citizens."

*Editorial Notes—Personal and General*

DR. JAMES ROLLO, Shattuck, is removing to Lubbock, Texas.

DR. EMILE ROY, Tulsa, has removed to Howey, Lake County, Florida.

DR. MILTON MORROW, Muskogee, has removed to Great Bend, Kansas.

DR. JESSE BIRD, Cement, has moved to 2531½ South Robinson Street, Oklahoma City.

DR. F. B. FITE, Muskogee, recently attended the convention of the College of Surgeons at Fort Worth.

DR. HUGH H. MONROE, Henryetta, has removed to Lindsay, where he will establish his practice.

CUSHING BOARD OF HEALTH has received no reports of quarantinable diseases for the past six months.

DR. H. C. MANNING, Cushing, has removed to a new home, a short distance from the Municipal Hospital.

DR. SHADE D. NEELY, Muskogee, was married to Miss Leila Roberta Hampton, at Tulsa, on Sunday January 6, 1924.

CUSHING and STILLWATER PUBLIC LIBRARIES are receiving "Hygeia" during 1924, with the compliments of Payne County physicians.

PAYNE COUNTY secretary has received a card of thanks for a floral tribute from Mrs. J. H. Proffitt, wife of the late Dr. J. H. Proffitt of Yale.

OKLAHOMA Board of Medical Examiners has just completed reciprocity upon the basis of examination only with the Board of Medical Examiners with the State of Louisiana.

PUSHMATAHA COUNTY MEDICAL SOCIETY elected the following as officers for 1924: Dr. H. C. Johnson, Antlers, President, and Dr. John A. Burnett, Crum Creek, Secretary-Treasurer.

DR. JOHN P. COWMAN, Comanche, has removed to Oklahoma City, and announces the opening of his office at 218 American National Bank Building, practice being limited to internal medicine.

DR. C. D. SIMMONS Stillwater, resigned his connection with the Oklahoma A. & M. College January 20, and expects to make his residence in Florida. He has been college physician at Stillwater for the past ten years.

MAYSVILLE, OKLAHOMA, says it has only one doctor, and wants another, asserting they have an excellent location for another active practitioner. Their population is 600 and they are surrounded by a very large and fine farming country.

DR. E. M. HARRIS, Cushing, reports a "haul" of over \$500 worth of contraband, recently.

DR. and MRS. N. R. NOWLIN, Oklahoma City, have returned from a week's stay in Texas.

DR. C. W. BATES has returned to Quay, after spending several months at Three Sands.

DR. T. O. CRAWFORD, Dewey, has returned from a post-graduate course at Tulane University.

DR. L. A. MITCHELL, Frederick, was called to Alabama recently on account of his mother's illness.

DR. R. T. EDWARDS, Oklahoma City, was called to Denver recently, by the serious illness of his mother.

DR. A. H. BUNGARDT, Cordell, attended the College of Surgeons meeting at Fort Worth recently.

DR. JOSEPH B. HIX, Oklahoma City, has removed from that place and reestablished his practice at Altus.

DR. WILLIAM J. CAVANAUGH, Cherokee, has moved to Amorita, Oklahoma, where he has established his practice.

DR. and MRS. A. E. CARDER, Coweta, entertained a number of friends February 9th, it being their thirty-second wedding anniversary.

YALE AND PERKINS members have been rather conspicuous by their absence from the Payne County meetings during the past two years.

DR. CHARLES E. WHITE, Pawhuska, has removed to Muskogee, and has been appointed City Physician in charge of the new Muskogee General Hospital.

MUSKOGEE COUNTY MEDICAL SOCIETY was entertained at the U. S. Veterans Hospital January 28th, as the guests of Colonel Hugh Scott, M. D., commander of the hospital.

OKLAHOMA CITY'S new Physicians Building will soon be under construction, the contract having been awarded February 11th. The building will have a capacity of from 400 to 500 rooms.

SEQUOYAH COUNTY MEDICAL SOCIETY has as new officers for 1924: Dr. T. F. Wood, Sallisaw, President; Dr. S. B. Jones, Sallisaw, Vice President, and Dr. E. P. Greene, Sallisaw, Secretary-Treasurer.

DR. LEILA E. ANDREWS, Oklahoma City, accompanied by her sister Miss Mae Andrews, plan to sail June 20th, on an extended tour of Europe, visiting England, France and other countries, returning in September.

WAGONER COUNTY MEDICAL SOCIETY met at Wagoner January 29th, and elected as officers for 1924 the following: Dr. T. J. Shinn, President; Dr. Samuel R. Bates, Vice President, and Dr. C. E. Hayward, Secretary-Treasurer, all of Wagoner.

WASHINGTON COUNTY MEDICAL SOCIETY met February 12 in the clinic room of the County Memorial Hospital, Bartlesville, in regular meeting. A paper was read on "Chronic Diseases of the Liver and Gall-Bladder," followed by a discussion.

BECKHAM COUNTY MEDICAL SOCIETY elected the following for its 1924 officers: Dr. E. S. Kilpatrick, Elk City, President; Dr. W. D. Oliver, Erick, Secretary-Treasurer; Drs. Dewitt Stone, Sayre, J. M. Denby, Carter, and A. A. Huntley, Elk City, Censors.

CUSHING COUNTY MEDICAL SOCIETY has been having some very profitable weekly meetings during the past year. Drs. Adams, Harris, Hough and Manning entertained during the past month. The Society succeeded in cleaning up, by mass action, several old outstanding industrial injury claims, recently.

MARSHALL COUNTY MEDICAL SOCIETY met on February 19 at Madill, and reorganized with the following officers: Dr. T. A. Blalock, Madill, President; Dr. P. F. Robinson, Madill, Vice President; Dr. W. D. Haynie, Kingston, re-elected Secretary-Treasurer, and Dr. John L. Holland, Madill, Delegate.

PITTSBURG COUNTY MEDICAL SOCIETY met February 1st, at the hospital laboratories of the State Prison at McAlester, the guests of Dr. J. W. Echols, the prison physician. Following the business session, Dr. Echols presented a number of interesting clinical cases from the prison, which was followed by discussion of professional topics.

OKLAHOMA COUNTY MEDICAL SOCIETY plans a medical library for Oklahoma City, which will be open to the public as well as the medical profession. For the present it is expected to have the library in a section of the Carnegie Library. Drs. W. L. Dersch, W. H. Miles and D. D. Paulus have been appointed a committee to collect and install the library.

DR. FOWLER BORDER, Mangum, is reported in the race for the candidacy for the democratic nomination to the United States Senate. He has been for twelve years Mayor of Mangum, is a director in the State Chamber of Commerce, and a member of his county and state medical associations. Dr. Border is a native of Texas. He took over the town of Mangum, as its Mayor, with a \$15,000 deficit; he put the town on a cash basis and it now has \$80,000 in its treasury, it is reported.

STEPHENS COUNTY MEDICAL SOCIETY, in keeping with cancer month, at its next meeting, will have a symposium on "How to Diagnose Cancer and Differentiate it From Other Diseases," as follows: Cancer of the Skin, Dr. Pate; Cancer of the Eye, Ear, Nose and Throat, Dr. McMahan; Cancer of the Organs of the Chest, Dr. Long; Cancer of the Liver and Gall-Bladder, Drs. Wharton and Williamson; Cancer of the Stomach and Intestinal Tract, Dr. Wallace; Cancer of the Genito-Urinary Organs, Dr. Caracker; Cancer of the Female Organs of Reproduction, Dr. Weedn; Cancer of the Mammary Glands, Dr. Ivy; Cancer of the Rectum and Lower Colon, Dr. Nieweg.

ST. ANTHONY'S HOSPITAL Clinical Society, Oklahoma City, met January 21 and elected officers for 1924 as follows: Dr. L. J. Moorman, President; Dr. A. D. Young, Vice President; Dr. S. E. Kernodle, Secretary-Treasurer, and Dr. R. M. Howard, Chief of Staff.

GREER COUNTY MEDICAL SOCIETY has newly elected officers for 1924 as follows: Dr. Ney Neel, Mangum, President; Dr. E. M. Poer, Mangum, Vice President; Dr. J. B. Hollis, Mangum, Secretary-Treasurer; Dr. O. R. Jeter, Brinkman, Delegate and Dr. Frank H. McGregor, Mangum, Alternate.

ATOKA COUNTY MEDICAL SOCIETY met January 28 at Atoka, and elected new officers for 1924 as follows: Dr. Thomas H. Briggs, Atoka, President; Dr. Charles C. Rose, Atoka, Vice President; Dr. Charles C. Gardner, Secretary-Treasurer; Dr. J. S. Fulton, Delegate, and Dr. Thomas H. Briggs, Alternate, both of Atoka.

OKLAHOMA CITY will soon have a Temple of Pain, says the Wichita (Kans.) Eagle, asking "Will it be sound proof?" The Temple referred to is the proposed new one million dollar office building, to be devoted exclusively to doctors and dentists. Wichita has no doctors and dentists office building.

CARTER COUNTY MEDICAL SOCIETY celebrated the birthday of Lincoln on February 12 with a banquet at the Hotel Ardmore. Following the banquet, an interesting program was provided, which lasted well into the night. Among the more prominent speakers were Dr. A. C. Scott, Temple, Texas, Dr. Horace Reed, Oklahoma City, Dr. Carl Puckett, State Commissioner of Health, Dr. LeRoy Long, Oklahoma City, and Dr. E. S. Lain, Oklahoma City.

TULSA COUNTY MEDICAL SOCIETY is defendant in a half-million dollar suit instituted by Dr. C. M. Vaughn for alleged damages to his practice and reputation. He had been expelled from the Society on account of unethical practices, but asserts that the real reason is his announcement that he had installed an "oscilloclast," invented by the late Dr. Abrams. Co-defendants in the suit are several of the Tulsa hospitals, who are alleged to have denied Dr. Vaughn the use of their institutions.

PAYNE COUNTY MEDICAL SOCIETY will meet at the Court Room of the City Hall, Cushing, March 11th, 2:00 P. M. A committee consisting of Drs. Adams, Harris and Manning will present the following program: Paper, "Pernicious Vomiting of Pregnancy," Dr. Benjamin Davis; Case Report of an Uncommon Condition, Dr. Edward M. Harris; "Some Observations of Head Injuries," Dr. Homer C. Manning; followed by clinics and case histories by all the membership.

TRI-COUNTY MEDICAL SOCIETY at its meeting a December, elected the following: Dr. A. S. Risser, Blackwell, President; Dr. J. C. Wagner, Ponca City, Vice President, and Dr. J. C. Hawkins, Blackwell, Secretary. This Society is composed of Kay County, Oklahoma, and Cowley County and Sumner County, Kansas. It was

organized in 1922 and the meetings are held in rotation as to the Counties and are proving to be excellent and a success. Meetings are held three times a year and the County in which held is responsible for the program and entertainment. Attendance is averaging 65. The last meeting was held at Wellington, Kansas, January 31st, and there were sixty member present. The next meeting will be held at Ponca City, Kay County, some time in April. Any M.D.'s are welcome to attend and can inform themselves of the exact date by addressing Dr. J. C. Hawkins, Secretary, Blackwell.

Dr. C. A. Thompson,  
Muskogee, Okla.

Dear Dr. Thompson:

At the San Francisco Meeting of the A. M. A., a resolution was adopted by the House of Delegates asking that steps be taken whereby the hazard to infants life from accidental inhalation of zinc stearate powders be mitigated. A committee was appointed by the Board of Trustees to investigate the matter and report at the 1924 session. The committee wishes physicians to make brief reports of such cases coming to their attention. Do you think it worth while to give the matter some publicity through the State JOURNAL, editorially or otherwise?

Only last week I had such a case which almost resulted in a fatality.

Respectfully yours,

Carroll M. Pounders, M.D.

532 Liberty Bldg.  
Oklahoma City, Okla.

Any Oklahoma physician who has had or knows of a case to which the above would apply, will confer a favor by communicating the same to Dr. Pounders. (Ed.)

#### DR. JAMES H. PROFFITT

Dr. James H. Proffitt died Jan. 19, 1924, in Yale. Funeral services were conducted Sunday in Yale and the body was sent to Maryville, Tenn., for burial. Dr. Proffitt came to Oklahoma City from Tennessee nineteen years ago and practiced in the city until 1918 when he took charge of the Mabel Dale hospital at Yale. Besides his widow, he leaves a sister, Mrs. M. B. Witt, 229 East Fifteenth Street, and three brothers and two more sisters who live in North Carolina and Tennessee. Dr. Proffitt was a member of his County and State Associations, a Fellow of the A. M. A., and attended the Lincoln Memorial University Medical Department, at Knoxville, from which he graduated in 1898. He was 53 years of age, and made a specialty of Surgery. His last operation was done at Cushing Municipal Hospital November 19, 1923. He had been staying at Brownsville, Texas, for some time in the hope of bettering his physical condition, having been a sufferer from tuberculosis. His fellow members of the societies of which he was a member, and his many friends regret the passing away of an honored colleague and a good friend.

#### DOCTOR GEORGE STRICKLAND

On the morning of January 7, 1924, at 8 o'clock, after months of suffering, death came quietly to another of Claremore's good citizens in the personage of Dr. George Strickland. In ill health for the past twelve years and bedfast for the past four months, it remained for the hand of the Master to heal the pain and suffering. As he faced life bravely, so did he face death with a calm fortitude and a sureness that the trials and tribulations of this world only better fit the individual for the joys and peace of the world to come. Dr. Strickland knew that he was going to die and he was unafraid because he knew that he had tried to live according to the teachings of God, and in death Dr. Strickland only claims a reward that he has earned as he traveled down the pathway of life.

Dr. Strickland came to Claremore in 1909 from Jenks, Oklahoma, where he was a practicing physician.

Dr. Strickland was a member of the city council at the time of his death, a member of the Guthrie Consistory, and a member of the Claremore Blue lodge and was also one of the faithful members and workers of the Claremore Methodist church.

Dr. George Strickland was born in Francisco, Ind., and at death was 66 years of age. He is survived by a wife, a son, James, a daughter, Mrs. G. C. Byers, of Burbank, two sisters, Mrs. Ella Farris, of Kansas City, Mo., Mrs. Walter White, of Chicago, Ill., and a brother, Howard Strickland, of Ft. Branch, Ind.

Dr. Strickland was a graduate of the Kentucky School of Medicine, Louisville, from which he graduated in 1883. He was a member of county and state associations and a Fellow of the A. M. A.

#### RESOLUTIONS

Since in His Infinite Wisdom, The Great Physician has seen fit to remove by death from among us our esteemed Brother Dr. Geo. Strickland, and,

WHEREAS, Dr. Geo. Strickland had been for many years associated with us and his Association we had come to love, therefore,

Be it Resolved by the Rogers County Medical Society, that we have in the death of our Brother Physician Dr. George Strickland, sustained a loss which we keenly feel in our deliberations, and,

Be it further Resolved that the County of Rogers and the City of Claremore has lost one who was untiringly in his labor for the betterment of the Community in which he lived.

Be it further Resolved that a copy of these Resolutions be spread on the minutes books of the Rogers County Medical Society, a copy furnished the Oklahoma State Medical Journal, The Claremore Press and a copy mailed to the family of our departed Brother.

Rogers County Medical Society,  
By your Committee,  
R. C. Meloy, M.D.  
Wm. P. Mills, M.D.  
A. M. Arnold, M.D.

## ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l. Bank Bldg. Oklahoma City

### 1. CLINICAL CASE—BUNIONS (Hallux Valgus).

Mrs. M. K. White. Age 43. Housewife. Admitted to the hospital January 26, 1922. Discharged February 6, 1922. Came for relief of painful feet.

**Personal History:** First noticed enlargement about 10 years ago. She thinks that wearing of short shoes started her trouble. The pain is limited to the metatarso phalangeal joint of each first toe, especially over the inner aspect. She states that it is almost impossible to secure shoes that do not aggravate the symptoms. There is no history of rheumatism. On examination of the feet we note first of all that the fore part of the foot is broad, as if the metatarsal bones were spread out fan shape. The big toe of each foot however deviates outward forming an obtuse angle at the metatarso-phalangeal joint which is reddened, calloused and tender but there is no evidence of acute inflammation. The longitudinal arches are almost flat.

**Operation:** Incision curved upward over prominence; skin dissected downward exposing bursa. Fascia over joint incised in same line as skin and head of metatarsal freely exposed. A thin flat chisel is placed at a point well above the exostosis and the protruding portion of the head of the first metatarsal is removed and surface smoothed. The bursa was dissected from the fascia, which together with skin flap was sutured with fine chronic catgut. Only one or two ties of bleeding points were made and triple O catgut was used. The tenotome was inserted on opposite side of the joint and the outer lateral ligament of joint divided so that the toe could be pulled into proper alignment. A plaster shoe was applied which held foot in dorsi-flexion and first toes in adduction.

**After Treatment:** Cast remained three weeks. Patient walked in them at the end of 8th day. When casts were removed Whitman braces were fitted to arches and a pair of stiff soled shoes with straight inner border were applied.

**Discussion:** Relief is sought for pain in these cases and not for deformity. Early cases can be relieved by proper shoes and strapping, but when a bunion has become confirmed, palliative procedures are useless. Pads between first and second toes increase deformity by forcing the rest of the toes farther outward. Splints are very impractical. The removal of the head of the first metatarsal known as the Mayo operation should only be done in cases of extreme deformity. It shortens the toe, interferes with weight bearing and is more likely to cause Hallux Rigidus. Removal of the sesamoids should be done only in rare cases where their bursa is involved. Transplanting of the extensor and other ingenious procedures are recommended but of little practical benefit. If the patient is relieved of pain he is satisfied. Correction of deformity is pleasing but not of prime importance. Removal of the protruding portion of

the head of the first metatarsal as described by the writer is quick, efficient and all that is necessary in most cases. Proper shoes, and bracing for the arch must never be overlooked.



Plaster Shoes After Operation

### 2. ORTHOPEDIC PRINCIPLES.—From Arthur Keith's "Menders of the Maimed." Hugh Owen Thomas.

Though little known before the late war, the Thomas splint has since immortalized the name Thomas. Born in 1834, he was destined to become an expert in Orthopedic Surgery because his father and forefathers were so called "Bone setters," of wide reputation in their day.

We have already seen that John Hunter prescribed "rest" as routine, and that John Hilton regarded rest as a most powerful aid to disordered tissues, but as Keith puts it, "Hugh Owen Thomas believed that an overdose of rest was impossible." He made rest his Creed and Ritual. Thomas is quoted as saying "Rest must be enforced, uninterrupted, and prolonged. Thomas cared little for the post-mortem room, operating room, or experimental laboratory, but it is stated that there never was a man who studied more persistently and observed more closely the manifestations of disease and injury as seen in the living state. His field of experiment lay in his upper workroom where in workman's attire he wrought the exact form of splint or machine which he desired for treatment of his cases. He made a statement at one time that "men admired my splints as if I were a blacksmith but the principles on which they were framed, they never could see." He never thought in terms of muscles, but in parts. For instance he realized that the hip joint could not be fixed, and give rest, unless the dorso-lumbar region of the spine were also fixed.

Movements of the knee also affected the hip and must be fixed to give the hip rest. Thus his hip splint, knee splint and many cases came through his keen observation of every day cases.

### 4. BONE SURGERY.—The Lorenz Bifurcation Operation. A preliminary Report. By Dexter D. Ashley, M.D., New York Med. Journal and Med. Rec., Feb. 7, 1923.

The author states that time and again patients have come to him with long standing deformities of the iliofemoral articulation—unstable, painful—due to disease, fracture, or congenital malformation. For these patients he has been unable to suggest any satisfactory method of relief.

The bifurcation operation of Lorenz has been

of great benefit in obtaining relief and it is a simple operation without any risk. The details of the technique are given, but are quite similar to those stated in the previous article.

The broad application of this operation can hardly be appreciated at first glance. Foremost of the conditions to be benefitted is the old, united fracture of the neck of the femur. If this operation were applicable to this condition alone, it would be a remarkable addition to our surgical procedure. In the second place this operation is indicated in pathological, unstable conditions due to tuberculosis, acute infections, acute arthritis neonatorum. Third, it is available also in cases of old painful congenital dislocations, or pathological dislocations, after typhoid fever, osteomyelitis, and other similar conditions.

### *EYE, EAR, NOSE and THROAT*

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

**CONCERNING THE SURGICAL TREATMENT OF GLAUCOMA: WITH SPECIAL REFERENCE TO MODIFIED ELLIOT-LAGRANGE TECHNIQUE.**—Vail, D. T.: *Ohio State M. J.*, 1923, xix, 645.

Acute inflammatory glaucoma, characterized by the sudden onset of great pain, marked oedema, chemosis, redness, and rapid loss of vision. This is treated by a von Graefte iridectomy and the cure is usually permanent.

Subacute inflammatory glaucoma, characterized by exacerbations of hypertension with intervals of apparently normal and slight or no ophthalmoscopic evidences. Although eserine will abort each attack, operation should be performed before great damage is done. The Smith iridectomy is the author's choice.

Secondary glaucoma. This may or may not require surgical interference, depending on its cause. In some cases of cyclitis, paracentesis of the cornea may be necessary. After a needling or a traumatic cataract, corneal section with washing out of the lens matter may be indicated.

Simple glaucoma characterized etiologically, according to Fisher and Lane, by arterio-sclerosis of the nutrient vessels supplying the globe of the eye and clinically by a gradual decrease in vision and fields without a corresponding increase in tension. This should be operated upon before it is too far advanced. The author gives the following rule: Drop eserine solution into the eye sufficiently often to prevent hypertension so long as there is no further loss in visual acuity or in the field of vision, but operate when eserine drops fail to control the tension and maintain the acuity and field of vision in statu quo. In the author's cases a modified Elliott-LaGrange operation has given the best results.

**STUDIES IN THE USE OF SUCTION IN DISEASES OF THE NASAL ACCESSORY NASAL SINUSES.**—Unger, M.: *Laryngoscope*, 1923, xxxiii, 691.

Studies were made of the variation in the air pressure in the nose during ordinary respiration, forced inspiration, and forced expiration, and of

the influence of these variations on the air pressure in the nasal accessory sinuses.

It was found that suction was created when the subject sniffed strongly, and that "auto-suction" produced by inhaling as strongly as possible through the nostrils with the mouth closed, is an effective means of applying suction to the sinuses.

The suction pump should be fitted with a vacuum gauge more sensitive than those now used and with a by-pass valve so that the vacuum can be regulated. The vacuum necessary to draw pus from the sinus must be ascertained first by using a gauge with auto suction or the pump, and the by-pass valve then set for that vacuum. The vacuum should be applied intermittently at intervals of a few seconds. The patient should be taught to use the auto-suction just as he is taught to use auto-polymerization.

**MASTOIDITIS WITHOUT INVOLVEMENT OF THE MIDDLE EAR.**—*J. Am. M. Ass.*, 1923, lxxxi, 1266. B. E. Hempstead.

Mastoiditis without involvement of the middle ear must not be confused with latent suppurative otitis media which is associated with deafness and at times with pain, but in which there is no spontaneous discharge of pus. The drum is lusterless, full and sometimes bulging, and pus appears on incision.

Three cases are reported. The first was preceded by furunculosis. The source of infection may have been the furunculosis or an otitis media. In the second and third cases there was a history of pain in the ear which disappeared without treatment within a very short time. In all of the cases the middle ear structures and the drum as well as the findings of the physical examination were negative. The swelling of the mastoid was the outstanding finding. Marked fullness of the superior canal wall external to the isthmus was noted.

**RECENT NASAL FRACTURES.** Frank, I.: *Ann. Otol., Rhinol. and Laryngol.*, 1923, xxxii, 768.

Of the many appliances used in the past in the treatment of the fractured nose, few are employed today chiefly because most of them were built to meet the requirements of individual or hypothetical cases or for application to artificial lesions produced on the cadaver.

Injuries of the nose are divided into two primary classes; injuries without loss of tissue and injuries with destruction of bone, cartilage and soft parts. The supporting structures of the nose are subject to dislocations and incomplete or complete fractures.

It is generally conceded that in the nose structures firm union does not take place until late in the second week or even the third week. The sheet copper splint is the best retention apparatus.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

**KOLMER COMPLEMENT FIXATIONS AS A SPECIFIC TEST FOR SYPHILIS.—W. F. Hartman, M.D., C. E. Reyner, B.S., Detroit, Michigan. Jr. of the A. M. A., Jan. 19, 1924.**

Specific complement binding substances in tissue of syphilitic, not known.

In no possible way can tissue extract antigens, in common use, be specific.

Complement binding substance more abundant at height of infection and not in the latter part of the disease as is the anti-body production in bacterial disease.

Therefore, it seems logical to suppose the process in the Wassermann reaction in the nature of chemical reaction.

The authors have made a most extensive and careful study of Kolmer's technic and have checked it by parallel tests with their own and other modifications of the Wassermann reaction and with the Kahn test for syphilis.

**Conclusions:**

1. The new Kolmer technic was found superior to their own technic. It gave from 10 to 30 per cent more positives.

2. It is less sensitive than cholesterinized antigen by the cold room fixation method, but gave no false positives.

3. It is superior to the Kahn test because of the difficulty of reading the latter and because it gave 25 per cent more positives.

4. Of fifty-three cases that were weakly positive by the Kolmer tests and negative by the other technics, not a false positive was found.

5. Weakly positive reactions bear a new significance pointing to syphilitic infections.

6. Conditions other than syphilis have given no confusing reactions.

7. Despite its biologic non-specificity this new test is proving itself specific through practical experience.

**STUDIES WITH THE FOLIN AND WU BLOOD SUGAR DETERMINATION.—Vera E. Rothberg and Frank A. Evans, Pittsburg, Pa. (Journal of Biological Chemistry, December, 1923).**

After a long series of experiments reading various strengths of dextrose solutions against standard sugar solutions, the authors arrived at the conclusion that the two standards recommended by Folin and Wu are insufficient. It was found that large errors resulted in many instances in which the standards used did not contain nearly the same amount of dextrose as the blood filtrate. In some instances the results varied as much as 15 per cent.

**A MODIFIED FOLIN AND WU BLOOD SUGAR METHOD.—Vera E. Rothberg and Frank A. Evans, Pittsburg, Pa. (Journal of Biological Chemistry, Dec. 1923).**

From the data in the preceding paper it was found that for accurate determinations the number of standards must be increased. To avoid this the following modification of the Folin and Wu

method for quantitative blood sugar determination is recommended: (1) The unknown is diluted after the addition of the phosphomolybdate-phosphotungstate sugar reagent until it is approximately the same shade as the standard instead of to a constant amount, before colorimetric comparison is made; and (2) this variable factor, the amount of dilution, is introduced in the final formula for calculating the amount of dextrose in the unknown. The tubes used are similar to the Folin and Wu sugar tubes, except that they are larger and graduated in steps of 2.5 cc.'s from 12.5 to 50 cc. In every other particular the Folin and Wu technique is followed.

In calculating the results the original formula of Folin and Wu must be multiplied by the fraction,

$$\frac{\text{dilution of the unknown}}{\text{Dilution of the standard (25)}}$$

using as the standard the equivalent of 100 mg. of dextrose per 100 c.c. of blood, the simplified formula would be

$$\frac{80 \times \text{dilution of unknown}}{\text{reading of unknown}} = \text{mg. of dex.}$$

per 100 cc. of blood.

**THE INFLUENCE OF DIET ON TEETH AND BONES.—Guttorm Toverud. (Journal of Biological Chemistry, Dec. 1923).**

Dental caries has, until recently, been considered more or less the result of local processes in the mouth, the general metabolism not being regarded as playing any important part in the process of tooth decay. A number of investigators have studied the influence of antiscorbutic vitamin on teeth. Zilva and Wells have found definite histological changes in the dentin and pulp from animals on a diet deficient in the antiscorbutic vitamin. The normal orthodontin is largely substituted by osteodontin. The chemical picture was also altered. A marked decrease in total ash and calcium oxide and a marked increase in magnesium was found.

The author fed white female rats on a low calcium diet in order to study the effect of pregnancy on the teeth during a period of calcium deficiency. The rats, however, did not breed sufficiently to study the factor of pregnancy.

Metabolism studies during the calcium deficient period showed, compared with animals on a control diet, a low calcium retention with an abnormally high magnesium retention.

The blood calcium had fallen from between 11 and 12 mg. of calcium per 100 cc. of serum in normal rats to as low as 5 mg. in rats on the diet. No tetany was observed.

Chemical changes have occurred as a result of the low calcium diet both in the front teeth (constantly growing) and in the molar teeth (formed, not constantly growing). The chemical process in the two kinds of teeth seems to be a different one. Analyses of the molars show a reduction in the total ash, with a small decrease in the calcium and phosphorus and a small increase in the magnesium content. Analyses of the front teeth show a reduction in all respects.

It is seen from these studies that it is possible to produce chemical changes in an already formed tooth by changing the diet.

**OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
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**TREATMENT OF CHILDREN IN THE HOME AND THE HOSPITAL.—John Zaborsky, Southern Medical Journal, Dec. 1923.**

The home is the best place for the well child. The parental love and care received there are necessary for its well being. There it comes in contact with adults who are relatively immune to most of the contagious diseases. Institutional care has never been a satisfactory substitute for home care. This applies to the sick child as well. Being transported to a hospital and placed in a strange environment, being cared for by a strange nurse and deprived of the love and care of its own mother does not have a good effect on the child. The satisfaction that comes with being in its accustomed environment, where it can be nursed and cared for by its own mother is a valuable therapeutic aid towards recovery. The educated mother's care and observation in most cases is worth more than that of a nurse to whom the child is a stranger. The man who intends doing pediatrics must prepare himself to do more efficient work in the home rather than the hospital. Most of the necessary treatment can be well carried out in the home. Even where a trained nurse is employed, the mother should still be allowed to take part in caring for her child. The financial side of the question must also be considered. Hospital care is much more expensive than home care. The valuable aid that has been rendered by children's hospitals in a scientific way is not discredited. The only types of cases for which hospital care is desirable are: (1) Cases requiring surgical care; (2) sick children who have no home; (3) some contagious cases and; (4) children in a critical condition from inefficient treatment at home.

**MEDICAL TREATMENT OF CONGENITAL HYPERTROPHIC PYLORIC STENOSIS.—James W. Bruce, Southern Med. Journal, Dec. 1923.**

The condition is not so rare as it was formerly thought to be. Any baby less than two months old that consistently vomits its mother's milk, especially if the vomiting is at all forceful, should be regarded as a probable case of pyloric stenosis until proved otherwise. The classical signs are: Projectile vomiting, visible gastric peristalsis and palpable pyloric tumor. The last named is often indefinite or impossible to demonstrate. Food retention in the stomach can be demonstrated by the stomach tube or x-ray. Every case should be treated medically first, and if that is unsuccessful should then be operated upon.

In 1918 Sauer introduced thick cereal feeding in these cases. The thick pasty mass resists the reverse peristaltic movements of the stomach and slowly passes through the pylorus. It is mechanically impossible to get it up. Fluids given at the time or later may be vomited, bringing some of the cereal with it. The giving of fluids is difficult.

A modification of Sauers original formula is used, consisting of: Whole milk, 1 pint; farina,

4 level tablespoonfuls, and sugar, 1 level tablespoonful. Cook until cereal sticks to inverted spoon. Two hours in a double boiler is sufficient. One to three tablespoonfuls of this is fed at four hour intervals. Probably the easiest method of giving it is to cut a large hole in a hygeia nipple, fill the large rubber cup of the nipple with cereal and poke it through the hole with a clean finger. Another method is to take small quantities on a wooden tongue depressor and put them far back on the infants tongue. It is a tedious process and may require an hour to give 1 to 2 tablespoonfuls at first. They soon learn to swallow it better. Food made of rice flour or barley flour is sometimes more easily given and better digested.

The thick cereal is digested by babies with pyloric stenosis while normal babies contract diarrhea from it. Probably the reason is that it is passed through the pylorus so slowly in the former that the intestines can take care of it. Attacks of diarrhea in these cases are considered favorable signs. They are usually preceded by periods of unusually good gaining and freedom from vomiting, indicating that the pylorus is letting the food through more rapidly. When it occurs, cereal feedings should be stopped as they are usually able to take liquid feedings then.

In milder cases it may be necessary to give the cereal only at alternate feedings.

In difficult cases the most effective method of administering fluids artificially for a long period of time is by the nasal drip. A small catheter is passed into the stomach via the nares and connected with an ordinary murphy drip.

The author has combined this method of feeding with the giving of large doses of atropine—as advocated by Haas. He begins with grain 1-1000 and rapidly increases the dosage until at the end of twenty-four hours grain 6-1000 or 7-1000 is given with each feeding. Excellent results have been obtained.

Surgery is indicated:

(1) When it is impossible to get good nursing care for a long period of time, one to two months. Professional nurses are not necessary. (2) When a baby fails to gain on medical treatment after three weeks trial.

(3) Where fluids are vomited and have to be given artificially for more than one week. The danger of intercurrent infection is so great here that longer medical treatment seems inadvisable.

**THE USE OF SALICYLATES PER RECTUM.—George R. Irving, Archives of Pediatrics, Dec. 1923.**

The method of giving salicylates by rectum was taken up in an attempt to find a more generally satisfactory way of administering the drug. It was hoped that some of the untoward symptoms might be avoided, as upset stomach, loss of appetite, skin eruptions, etc. It was very desirable to do away with stomach irritation so the children would be benefitted by being able to take all the food possible. It was also felt that if untoward symptoms developed it would be of distinct advantage to have the drug in such a position that any not already absorbed might easily be withdrawn.

The method was used in the wards of the Post Graduate Hospital (New York City) and in 266 ambulatory patients. These latter were seen in the clinic on special days, but had their medical

treatment carried out in the home by one of the members of the family. Sodium salicylate was used. It was usually prescribed in four ounce mixtures—each fluid ounce containing five or ten grains of the salt. The required number of ounces of this prescription is mixed with an equal amount of a bland, water-soluble substance, as one of the mucilages, or better, starch. The starch is first moistened with cold water and then boiling water is added until such a consistency is obtained that it will barely run off the spoon. The material properly mixed is sucked up into a baby bulb syringe, the tip thoroughly lubricated and all air expelled. The patient either lies on the side or back. Administration is to be attempted only after one hour has elapsed from the time of the movement of the bowels—or if an enema has been used it is advisable to wait somewhat longer. The injection must be held in at least one hour for absorption. If expelled within this time it is to be repeated.

Large doses can be administered. The average dose used was 20 to 100 grains. There was good evidence that absorption takes place satisfactorily. Alkalies were usually given and large quantities of liquids. So far as it could be determined, there were no ill effects with the exception of skin eruptions in two cases, distinct loss of appetite in four and diarrhea in three. One or two doses can be given daily.

### GENERAL SURGERY

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### SOME ANCIENT HISTORY

Intravenous injection of drugs and transfusion of alien blood had their scientific origin in the 17th century.

The first case of localized appendicitis on record was operated on and reported by Mestivier in 1759, and the pathology clearly described in the autopsy yet it made no impression on practice.

Gentile da Foligno who died in 1348 was the first to observe gallstones.

The cure of disease by the extraction of decayed teeth was first suggested by Benjamin Rush in 1798.

**POSTOPERATIVE INFECTIVE PARODITIS.**—Fisher, William H. *Annals Surg.* Nov. 1923, P. 568.

The author classifies the infective inflammations of the gland, on the clinical manifestations that occur representing the various degrees of severity and the systemic reaction.

1. Acute parotiditis. 2. Acute suppurative parotiditis circumscribed or lobular. Diffuse. 3. Gangrenous.

He considers the disease as an infective one and even though the operation be a clean one, foci of infection exist somewhere in the body and bacteria exists in some degree.

The resistance of the patient, the susceptibility of the gland and potency of the infection agent will determine the type of disease that will de-

velop. The acute or simple, follows operation in from three to five days, with a malaise, slight elevation of temperature and pulse rate, stiffness of the side of the face, swelling of the gland and pain on pressure. This will subside in a few days by appropriate treatment.

In the circumscribed suppurative form after abscess has place, all the symptoms are intensified, but Stenson's duct usually remains patent and pus extrudes from the duct into the mouth, if no obstruction exists. In these cases exclude any stone or cicatrices which close the duct.

The diffuse type is rare and is grave disease, the mortality rate being 30 per cent. The gangrenous type is also rare and all writers report a fatal result.

The author's summary is as follows:

1. Every post operative parotiditis is a potential lethal factor, until proven benign.

2. To await spontaneous evolution is jeopardizing life.

3. Definite diagnosis suggests the method of relief.

4. When surgical operate early with free incision and open drainage.

5. The greater the involvement of face and neck structures and especially in gangrenous parotiditis, the greater the need for more thorough exposure.

6. The incision meeting all indications is the Y incision, extending from the zygoma in a curvilinear manner, following the sterno-cleido-mastoid to the supra-clavicular region if necessary. The posterior limb extending from the mastoid and joining it below the angle of the jaw.

**A RARE COMPLICATION FOLLOWING APPENDECTOMY.**—Webb, George. *J. A. M. A.*, Aug. 25, 1923. P. 660.

The author reports the case of a woman, on whom he operated in 1922 for an acute attack of appendicitis; The case was clean and no drain was used and the convalescence entirely uneventful. The technic used was, he states, the usual one of inversion of the stump and pursestring suture. She left the hospital in 12 days entirely well and feeling good.

Two years later she was readmitted complaining of a dull continuous pain in the R. L. Q. of one month's duration, with constipation, fullness in the abdomen and loss of appetite.

On palpation a mass was felt in the ileo-cecal region the size of a man's fist, not tender nor movable. Following an x-ray of the intestinal tract a tentative diagnosis of a probable tuberculous tumor was made. She was operated on and a tumor the size of a large orange, involving the whole ileo-cecal junction was resected, a side to side anastomosis was done and the patient recovered after a rather stormy convalescence, during which a fecal fistula formed but closed spontaneously. Her condition was excellent on leaving the hospital.

The author believes that the stump which protruded into the bowel caused the ulcer, which was found on the opposite side, since the ulcer corresponded in size to the stump. The ulcer was covered with a foul smelling detritus. The pathologists report was that the mass was inflammatory, and no signs of malignancy present. He explains his theory, of the condition, by a slow

pressure necrosis of the bowel wall by the inverted stump, with hyperplasia and connective tissue proliferation.

(Since 1915 when the editor visited John Young Brown's clinic and saw him simply crush and tie the stump, he has never inverted one, or used the pursestring suture. Cases since reoperated by the editor, in as short time as six months later have shown no vestige of the stump remaining, and the cecum was so smooth, that the appendix location could not be seen, and no adhesions were present. If the stump is very large it may easily be covered with a tab of omental fat. (Ed.)

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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#### ABORTIVE TYPE OF TUBERCULOUS HIP-JOINT DISEASE. Report of Two Cases.—A. L. Neilson, M. D., *Journal A. M. A.*, May 19, 1923.

Past experiences with tuberculous hip-joint infections have proven that it is a condition marked by a long continued progressive course unless halted by proper treatment which of necessity requires a long time. Abortive types of tuberculous hip-joint diseases are unusual, and in the few articles found in the literature that discuss the question, there is practically an agreement that abortive types do not occur.

The author gives a report of two cases of clinically definite tuberculosis of the hip-joint which cleared up with practically no treatment and in a very short time. Case No. 1, a boy aged two and one-half years, whose history was uneventful, was examined on October 23, 1920. He complained of lameness of the right leg and pain above the right knee. The onset was two days before when he awakened and cried out with pain in the knee and it was found that he could not stand on the right leg. There was no history of injury. X-ray report was negative. Pierquet skin test was markedly positive in twenty-four hours.

A diagnosis of tuberculosis was made and treatment by immobilization advised but the parents wished to wait for a while so rest and hygienic measures were carried out. In six weeks after the onset recovery was complete. Case No. 2, is very similar in onset and symptoms to case No. 1. In view of the course of case No. 1, rest and hygienic measures were advised, six weeks later there was complete relief of symptoms. While not definitely proven, it would seem that there is an abortive type of hip-joint tuberculosis.

#### FATIGUE AS A FACTOR IN THE CAUSE AND TREATMENT OF TUBERCULOUS DISEASE.—H. A. Patterson, M. D. *Journal A. M. A.* October 13, 1923.

The author feels that fatigue and its accompaniments constitute a larger factor in arousing latent tuberculous infections than is generally recognized. Malnutrition so often cited as a causal factor in the development of tuberculosis is considered as frequently a result of over fatigue by Emerson who considers it as third in importance as a cause of malnutrition. However, this is not accepted by all writers. Fisk maintains that

sickness is a cause rather than a result of fatigue. The sense of exhaustion which persists for many weeks or months following an attack of influenza is an example of fatigue as the effect rather than the cause of disease. On the other hand, exhaustion due to physical labor or mental stress, or both, is widely recognized as the contributing factor in such infections as furunculosis. Pneumonia is often a complication during convalescence from an exhausting injury or illness. Since this is true of one species of bacteria, such as the staphylococcus, it is probably true of others, such as tubercle bacilli, which like the staphylococcus, is latent in a large percentage of the human race.

The author considers rest as the most important of the fundamental factors of the treatment of tuberculosis, especially in the beginning when it is necessary to slow the pulse rate and reduce the temperature, where fever exists. When poor nutrition exists, rest and fresh air and good food are essential. Rest is essential in cases where there is exhaustion from the toxins of the tuberculous disease in order that the effort to wash out these products of bacteriological activity may not be retarded by the products of combustion due to physical effort. When the tuberculous activity is due to exhaustion caused by fear or worry, it may be relieved by mental rest which is secured by controlled occupational therapy.

The author mentions the problem of patients who have been discharged from sanatoriums with the disease in an apparently arrested form and who later have a breakdown or reactivation. This, he states, is not entirely due to undue physical exertion but to all those factors that contribute to fatigue: faulty diet while under treatment which tends to a fat, flabby condition of the muscular system which results in a disturbance of metabolism; failure to secure a period of hardening up by carefully supervised graduated exercise which is a means of acquiring resistance to fatigue; return to the same domestic and industrial conditions under which the disease became active; and dread of reactivation.

The author concludes by setting forth three problems for consideration and study in the treatment of tuberculosis; (1) The determination whether or not the "toxic substances" of fatigue are the cause or one of the important causes of the activation of latent tuberculosis; (2) the development of satisfactory, easily applied tests or clinical guides for determining cumulative fatigue; (3) the further study of occupation for the tuberculous with reference to the features of employment producing mental and physical fatigue.

#### DIAGNOSTIC IMPORTANCE OF TUBERCULOUS LESIONS OF THE ORAL CAVITY.—Robert H. Ivy, M.D., D.D.S. *Journal A. M. A.* Nov. 3, 1923.

Tuberculous ulceration of the mouth is undoubtedly usually secondary to pulmonary tuberculosis, the infection being conveyed by the sputum. The bacilli are implanted in a region that has previously been the seat of local inflammatory condition. The author cites three cases where the finding of ulceration of the mouth was the first intimation that the patient was suffering from tuberculosis. These patients, so far as they knew, were in good health with the exception of the lesion in the mouth which refused to respond to treatment,

but continued to spread over the mucus surface of the mouth. Thorough examination, including chest examination and microscopical examination of tissues removed from the infected area, proved that the primary condition was pulmonary tuberculosis. The author considers that general anti-tuberculosis treatment is of primary importance and local treatment secondary.

**SELECTIVE COLLAPSE IN PULMONARY TUBERCULOSIS.**—Nathan Barlow, M.D. *Journal A. M. A.*, Dec. 8, 1923.

The principle of selective collapse is manifested in a series of phenomena that may be described thus: (1) If the lesion is not too severe, inflammation or irritation of the tissue in any region of the lung causes a tendency of the involved tissue to collapse. (2) A similar tendency to collapse is present in any anatomic division of a lung (lobe, primary lobule, secondary lobule), the bronchus supplying which is irritated. The contraction develops gradually and in a few hours or days the tendency to contract is balanced by the increased tension of the adjacent healthy portion. This increased tension is distributed unequally throughout the lung, the greater part being borne by the adjacent lung tissue because the lung is obliged to conform to the thoracic cavity and cannot alter its form. Where there are consolidated areas selective collapse is manifested at the periphery of such lesions where the tissue is involved but not consolidated.

The introduction of a small quantity of gas or air into the pleural cavity that is freed from adhesions, introduces an entirely new condition. The volume and tension of the lung is reduced and the lung is now free to assume any form and the principle of selective collapse unhindered in its action. The pleura over the involved parts of the lung becomes retracted and the gas collects over the most involved regions. The localization of the gas is a result of the action of selective collapse, the collapse itself takes place in the lung tissue and appears to select, first, the inflamed tissue in and around the lesion and, secondly, lung tissue in regions supplied by involved bronchi. In scattered deep-seated lesions, the lung may not collapse immediately beneath the retracted pleura, but only around each lesion, leaving expanded parts between the lesions. This selection of diseased areas explains how a relatively small amount of air may cause effective collapse of lesions scattered throughout an entire lobe.

Selective collapse requires from several hours to several days to develop to the point at which it is balanced by the increased local tension and while in the early period of development is easily dissipated by rapid or deep breathing or severe prolonged coughing. Hence the importance of absolute rest during the process of selective collapse. The more perfect the collapse in this early period, the more contracted will be the lesion when healed and the less contracted the lung, as the fibrosis will be limited to a smaller area.

## GENERAL MEDICINE

Edited by Wann Langston, M. D.

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**SCARLET FEVER TOXIN IN PREVENTIVE IMMUNIZATION.**—Geo. F. Dick, M.D., and Gladys Henry Dick, M.D. *J. A. M. A.*—82-7, Feb. 16, 1924

The author states that Berkefeld filtrates of hemolytic streptococci used successfully in experimental scarlet fever may be used intracutaneously to determine susceptibility to this disease. The toxicity may also be neutralized by convalescent serum; and persons showing susceptibility become negative after immunization with convalescent serum.

A series of experiments are cited, showing that when persons with positive skin tests are injected with suitable quantities of toxic filtrate, they may develop a scarlatinal rash with nausea, vomiting, rise of temperature and general malaise appearing within a few hours and disappearing in forty-eight hours, and followed by negative skin test. The similarity of symptoms produced by filtrate to those of scarlet fever, and the resulting modification of the skin test, indicate the production of some degree of immunity to scarlet fever. The neutralization of the toxic substance in the filtrate by blood serum of a person who had received injections of the filtrate indicates that the toxic substance is a true toxin, capable of forming an autotoxin.

**THE INCIDENCE OF KETOSIS IN CASUALTY PRACTICE.**—O. W. Roberts, M.B., B. S., Lond., *The Lancet*, CCVL, 5238. Jan. 1924.

Upon a study of 393 cases of head and other injuries, irritation of the respiratory and gastrointestinal tract, and toxemia due to burns and scalds, and to suppurations, with a total of 168 cases of ketosis, or 43 per cent, the author concludes that these conditions may be complicated by the onset of acute severe ketosis. The younger the patient the greater the possibility of this complication. This ketosis may aggravate or mask the symptoms due to the primary condition. The central nervous system, having in itself no protection against ketosis or acidemia, suffers most, as evidenced by drowsiness, irritability and headache.

Ketosis, if untreated, may lead to severe vomiting, may interfere with the patient's recovery, and may prolong the convalescence. The general debility, listlessness and dread of mental strain seen in concussion cases of school age for months after the injury may be the result of ketosis rather than to physical trauma at the time of the injury.

Treatment consists in the administration of alkalis and aperients. In children the prophylactic administration of alkalis in cases of acute trauma and inflammatory conditions would diminish the occurrence of acute ketosis and would not cause harm to the patient.

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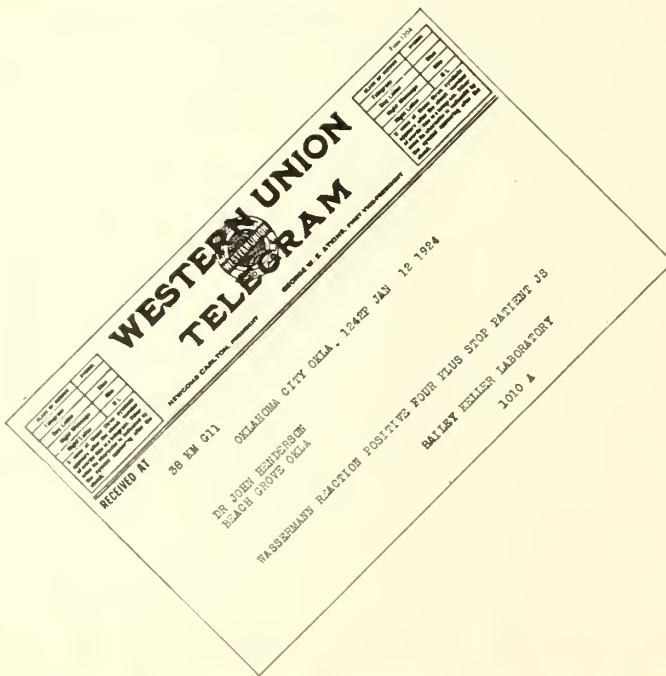
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# THE JOURNAL

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### THE MANAGEMENT OF ABORTION\*

ALBERT C. HIRSHFIELD, B.Sc., M.D.  
OKLAHOMA CITY

Statistics indicate that approximately one-third of all pregnancies end in abortion.

The term abortion is herein used to include the interruption of pregnancy from whatever cause at any time prior to the period of viability of the fetus.

No subject in the realm of obstetrics and gynecology has prompted more discussion and controversy than that of the treatment of abortion; and in probably no other question in this field is there so much diversity of opinion, and so many different individual techniques.

An investigation of this subject by the essayist was prompted by an informal discussion among the members of the obstetric department of the University Hospital of a case of abortion, in which no two of the members present agreed on the proper *modus operandi*. One would have left the uterus and vagina absolutely alone; another would have immediately cleaned out the uterus, and the third would have followed a course more or less between the ones mentioned. Each man was able to quote ample and representative authority for his method; and so it is in the literature of the subject. A rather hasty review of the voluminous literature on this subject, together with the perusal of some dozen or more personal communications from representative gynecologists in different sections of the country, convince the writer that we are far from having anything like a standardized method of treatment of any form of abortion.

In general, the field is divided into two camps: The radicals, stronger numerically, who insist on immediate and complete evacuation of the uterus; and the conservatives who do not invade the uterus unless forced to do so by hemorrhage or delayed convalescence, and only in the latter case when there

is absolutely no indication of intra-uterine infection and the temperature has remained normal for several days.

Therefore, one may be amply supported by authority in whatever course he pursues, and each of us, therefore, must carefully study the question from all angles, and then each man must choose for himself which master he will follow.

The treatment of abortion may be divided into that of (1) threatened abortion; (2) inevitable, or abortion in progress; (3) incomplete, clean; and (4) incomplete, septic. The latter class may also include the so-called cases of post-abortion sepsis, which do not differ materially in indications for treatment from the incomplete septic type.

The treatment of threatened abortion may be dismissed with a word, as there is no controversy regarding the indication in these cases for rest, sedation, and the abstinence of all local treatment. The one thing we have to offer in this type of cases is in discouragement of and a warning against making vaginal examinations. There is little to be learned from a bimanual examination at this stage of abortion; the amount of flow and the character of the uterine contractions being of greater diagnostic value than the condition of the cervix. An examination will make the abortion more likely from irritation of the uterus and the increase of hemorrhage, and is also very likely to convert a clean case into an infected one. Even though the operator's hands be carefully prepared and gloved, he will transmit organisms from the always infected vulva and lower vaginal region into the relatively sterile region of the upper vagina and cervix.

Right here we should like to establish the dictum that, in abortion, as in full term labor, no vaginal examination should be made until the patient is completely prepared as for any vaginal or intra-uterine operation, and then only with the utmost gentleness. When we have learned to be as careful in the asepsis of our abortion cases as we are in our labor cases, then shall we see a marked decline in the mortality and morbidity of abortion, which are far too high. We have

\*Read before Section on Pediatrics and Obstetrics, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

been astounded to find that the mortality of abortion ranges from .37 per cent in the best series of entirely clean cases to the astonishing figure of 67 per cent in one series of septic criminal cases. There are numerous series of septic cases in which the mortality averaged around 50 per cent. These figures indicate that abortion is the most poorly treated of all gynecological conditions. And yet there is no estimating the morbidity of abortion, which ranges downward from definite pelvic pathology and chronic invalidism to the common symptomless cases of sterility following abortion. F. Reder has operated eight cases of sterility following abortion in which there were no symptoms nor other external evidence of pathology, but in which the tubes were firmly sealed. The writer has found abortion of greater etiologic occurrence than gonorrhea in his own cases of salpingitis. In fact, we rather doubt that gonorrhea is often transmitted to the pelvis unless there be a superimposed abortion, curettment or other intra-uterine manipulation.

In the treatment of inevitable abortion, conservatism should be the keynote of our treatment, and if followed consistently will succeed in the majority of cases. Gordon in an analysis of 530 cases at Bellevue Hospital states that the non-operative treatment, if properly executed, will fail in less than four per cent of cases. First, however, let us elicit a very careful history in regard to any prior instrumentation. Where this is often at first categorically denied, an admission can frequently be obtained if the physician will gain the confidence of the patient and assure her that it is only in her interest that this information is sought, and that it might possibly mean the difference between life and death to her. In case there has been outside interference, the physician must protect himself by counsel, hospitalization and the avoidance of all secrecy, and in some cases, at least, notification of the authorities.

Granted that a case of inevitable abortion is clean, both from the history, and the absence of signs of infection such as an elevation of temperature, leucocytosis, local tenderness, etc., the treatment is the same as for the cases of incomplete clean abortions and the two will therefore be considered together.

The only indication for immediate evacuation of the uterus in these cases is profuse hemorrhage, and even in this case the loss of blood can usually be better controlled by packing and the use of pituitrin or ergot. If the cervix must be first artificially dilated, and the placenta detached from the uterus, the operator may find that his hemorrhage is increased and with a patient already suffer-

ing from loss of blood, the hemorrhage is apt to be irreparable before the one stage operation is completed. This is especially true, after the third month. However, in the absence of considerable hemorrhage and up to the 12th week; if, on examination, the cervix is found quite soft and open, it is just as safe and more expeditious to remove the ovular material with sponge forceps, dull edged ovum forceps, or the gloved finger. Occasionally, however, the placenta is so adherent and so broken up that it cannot be thus removed. In this case, we see no objection to the gentle use of a large end Braun wire loop curet, or some other quite dull curet. However, if the dilation and separation are not sufficiently advanced that evacuation can be accomplished with the use of sponge forceps, the writer believes it much safer to pack the cervix tightly with iodoform gauze, tampon the vagina tightly with gauze or cotton and put the patient back to bed for another 24 hours. One or two doses of morphine and atropine are given to relieve the cramping and further the dilation of the cervix. The packing is removed after twenty-four hours and very often the ovum in toto will follow the exit of the pack, or occasionally, as happened in one of our cases a few days ago, the pack, fetus and placenta will be spontaneously delivered. But generally, separation will have occurred and removal of the products of conception becomes a very easy task. Or, if the operator prefers to wait, the uterus will usually empty itself, which can be expedited by the administration of a few half c.c. doses of pituitrin. Many men use pituitrin as a routine, whether the uterus is entered or not. By contracting the vessels and sinuses, it minimizes hemorrhage and the danger of embolism; and by thickening the walls of the uterus renders it less liable to injury in instrumental cases.

If this first packing does not satisfactorily dilate the cervix and detach the ovum the case should be repacked and put back to bed. However, if a case is properly packed, a second packing will rarely be necessary. However, a second or even a third packing is preferable to forcibly dilating the cervix, which means more or less tearing of the cervical musculature and perhaps of the lower uterine segment. All of us who have practiced ten years or more remember when it was considered quite the thing to assist a woman in labor by dilating the cervix with the hand (and often the bare hand at that) and accouchement force with forcible dilation by the hand, or by powerful Bossi metal dilators, for the rapid relief of some emergency was considered high class obstetrics.

But this procedure is now taboo among even mediocre obstetricians and we all know that manual dilation is synonymous with manual tearing. If this be true of the cervix at term, why is it not also true of the pregnant cervix of an earlier stage. We believe that the time is not far off when forcible dilation with the powerful branched dilators as well as routine curettage will be considered charlatanerie and relics of the barbaric in medicine. If instrumental dilations must be secured it should be done with force applied uniformly to the whole circumference of the cervical canal. This may best be done by the graduated uterine sounds of Hegar.

In passing to incomplete septic abortion, we are considering an entirely different surgical field, so to speak, and must approach the problem with due realization of the serious possibilities involved. If conservatism is to be recommended in the clean cases, it is to be insisted upon in the septic ones. In the first instance we are dealing with a field that is already sterile and we are only asked to keep it so. In the second instance, however, we are dealing with a field that is already infected and we are confronted with the double task of combatting the infection as it is, and preventing its spread to susceptible fields lying all around.

Obviously, then, we can not hope to limit this infection by scarifying and otherwise traumatizing the underlying structures any more than we would attempt to break up the adhesions around a recently ruptured appendix on the theory that the adhesions are a part of the inflammatory process and must be removed. Or, if we have an ulcerated bowel, as in typhoid, we do not attempt to remove the ulcers by removing the mucous membrane. If we refrain from operating on an acutely inflamed tube, when the whole mass may be removed entirely, why should we operate on an inflamed uterus by peeling off the protective surface, leaving behind an unprotected surface of muscle, lymphatics and venous sinuses. In other words, the less we do in an active way for an infected uterus the better chance will it have to wall itself off from the invading hosts by a more or less impregnable leucocytic wall. If one can extirpate the whole uterus while the infection is entirely limited therein, that is not bad surgery; but to remove part of it, and that part of it chiefly concerned in the combatting of infection, and leave the rest mercilessly exposed to the enemy seems anything but good surgery.

While there are many good men who yet curette a clean uterus either to shorten the convalescence, or to stop bleeding, the circle

of those who believe in cleaning out a septic uterus is gradually narrowing down to a few radicals, like unto the few men who still curette, or explore, or daily douche the puerperal septic uterus.

Mosher has, since adopting the conservative treatment of these cases in 1914, reduced the average stay in the hospital from 22 to 8 1-3 days, and the complications and sequela have dropped from 70 per cent to 5 per cent in those conservatively treated.

In order to check the efficacy of the conservative treatment in septic abortions, Hillis ran two series of 100 cases each, in which all the cases in one group were curetted, while the other 100 were treated conservatively, which means in this instance no local treatment until free of fever five days, at which time the case is considered non-septic. The results obtained will be briefly tabulated as follows:

Average days of fever; curetted case..	8.1
Average days of fever; no local treatment .....	3.5
Average days in hospital; curetted cases .....	13.3
Average days in hospital; no local treatment .....	8.5
Complications; curetted cases.....	19
No local treatment.....	4
Mortality; curetted cases.....	3
No local treatment.....	1

These figures compiled from a carefully worked out series of 200 cases speak for themselves. Many other figures from recent literature might be quoted to show the advantage of the conservative over the radical treatment in septic abortion. But we feel safe in saying that in all septic cases we should refrain from entering the uterus until the temperature has been normal for anywhere from three to fourteen days, depending upon the character of the infection, and until any tenderness in the fornices, or over the adnexa has cleared up. Naturally, one may have to enter the uterus for severe hemorrhage, but unless the cervix is well dilated and the ovum detached, it will be found safer to first pack, as outlined above, or, in any case, if the cervix is found wide open and the ovum presenting, the most conservative advocate could not object to gentle removal by sponge forceps, though an ampoule of pituitrin, repeated in an hour if necessary, should first be tried. Brodhead reports a series of incomplete abortions in which fifty per cent of the uteri were entirely evacuated by the use of pituitrin.

Evacuation of the uterus by the gloved finger is the favorite method of many operators. This is no doubt satisfactory where

the cervix is freely open and the placenta has attained some considerable mass, but it will hardly be found satisfactory in the early cases, or to remove small bits of tissue. This can only be done by introducing the whole hand into the vagina, and an anesthetic is thereby necessitated. In addition to this, there is some danger, especially in primipara of traumatism to the vagina and floor of the urethra. Furthermore, this finger curettage in septic cases may be distinctly harmful as shown by Schottmuller in a series of cases, comprising in all 2,000 abortions. He proved definitely that during manual evacuation of the infected uterus, through the finger introduced into the uterus and the pressure exerted by the other hand on the uterus from without, the pathogenic bacteria that are present in large numbers on the endometrium are pressed directly into the open vascular lumina; for in 77 per cent of the cases pathogenic bacteria were found in the blood stream immediately after manual evacuation.

For this reason, he has abandoned digital evacuation entirely for the use of Winters abortion forceps.

The conservative treatment of these cases consists of rest in bed in the Fowler position; nourishing diet; in the severe cases, proctoclysis of glucose and sodium bicarbonate solution; ice cap over the uterus; morphine sufficient to keep patient quiet; ergot, with or without strychnine, in sufficient quantities to keep uterus contracted. If there be much bleeding this can be controlled with pituitrin in one-half to one c.c. doses. If, in the meantime, the uterus does not empty itself, this may be done with convenience and safety after the infection has been localized and overcome. Hillis, after an intensive six months' study of over 200 cases, gives five days of normal temperature as the minimum time for interference, though DeLee states that ten to fourteen days free of fever should elapse. This, however, will vary with the individual case, and must be left to the operator's discretion.

#### SUMMARY

1. The conservative treatment of all abortions is the method of choice; but, in clean cases, packing and subsequent evacuation by forceps may be safely substituted, and will probably produce a quicker convalescence.

2. The curette is but rarely indicated in abortion, and the sharp curette never.

3. Removal of placenta by ovum forceps or sponge sticks is preferable to digital curettage except with a widely dilated cervix of a uterus past three or four months.

4. In septic abortions, conservatism must be followed, except in case of life-threatening hemorrhage.

*Discussion:* DR. W. W. WELLS, OKLAHOMA CITY.

This paper is the last word in the treatment of abortion. There are few points that I wish to emphasize, one is in the clean cases where we have hemorrhage sufficient that we must do something to stop it, I prefer the sponge forceps for emptying the uterus and then instead of packing with iodoform gauze, I swab out the uterus with tincture of iodine and pack with plain gauze. This causes the uterus to contract down and there will be enough iodine mixed with blood that the plain gauze saturated with this mixture will be more antiseptic than iodoform gauze. The infected abortive cases should be put in a Fowler position unless there is a great amount of hemorrhage.

#### OKLAHOMA CITY CLINIC ROUND TABLE

WESLEY HOSPITAL  
OKLAHOMA CITY

DR. A. L. BLESCH: *Appendicitis, Acute, Suppurative, Primary with Perforation—Peritonitis and Obstruction.*

Case: Young man, 22 years of age, taken acutely ill a week before writer was called to see him in his home, in a neighboring City.

The history shows that the attack was atypical in the beginning for acute appendicitis, only in that he had at the same time a right orchitis. In passing I desire to note the clinical fact that orchitis is never gonorrheal in origin. Epididymitis is the true metastatic or continuity gonorrheal lesion. Orchitis may be syphilitic or metastatic from many infections other than from the parotid but in all my clinical experience I have never seen it follow gonorrhea.

This orchitis misled the attending physician to the extent that he overlooked a rapidly advancing acute appendicitis which was the most probable source of the orchitis.

The appendix had perforated and at the time the writer saw the patient he was in advanced diffuse peritonitis. Temperature 101—pulse 120—thready, skin clammy. Facies pinched. Appeared extremely ill. Respirations thoracic. Abdomen distended, tympanic, rigid, extremely tender.

*Diagnosis:* Peritonitis, diffuse, septic, advanced, due to perforated appendix.

*Operation:* In home—midnight—multiple drainage of abdomen.

*Findings:* Intestines distended, dark red in color, diffuse peritonitis—enormous quantities of free malodorous pus. No localization.

*Remarks:* These cases are prone to post-operative abscess formation for the reason that in so complicated a cavity as the abdominal, there are many recesses which cannot well be reached by any sort of drainage yet devised. One or more of these may become excluded by one or another cause such as the agglutination of intestinal coils, omental adhesions, etc. In that case an abscess will develop indicating its presence by exacerbations of temperature and local findings.

This happened in this case and the patient was later sent to the hospital for this complication, as complication Number One.

Complication number two proved to be a metastatic abscess of the right lung which perforated into a bronchus and recovered spontaneously.

Complication number three was an acute intestinal obstruction for which, because of the profound exhaustion and critical condition of the patient, an enterostomy was done under local anesthesia. Relief complete and immediate. After a few weeks patient was returned to his home to recuperate against the coming major operation which he yet faced for the permanent relief of the obstruction. After several weeks at home, he returned in good condition for the final operation.

*Operation Final:* Anesthetic—local—novocain and adrenalin. Incision eight inches, surrounding enterostomy opening. Gut liberated from enterostomy opening, sutured. Exploration of abdomen revealed three areas of complete obstruction involving the terminal three feet of ileum, necessitating the resection of the entire area involved. A sufficient stub of the terminal ileum was saved so that an end-to-end anastomosis could be made and the ileo-cecal valve saved.

One area of obstruction was found in the right iliac fossa and covered about eight inches of bowel, another in the mid-line of the belly and the third in the left iliac fossa. Appendix, the end of which had sloughed, was removed.

Convalescence uninterrupted.

*Remarks:* This case is reported not for its rarity unfortunately. Such cases are, alas! only too common. This is one of many we have had, most all of which we have saved by spreading the operative load. The youngest was a baby three years old, who went

through exactly the same sequence as this case. With children of tender age, for such a condition of things to grow out of an acute attack of appendicitis, is excusable, since very often, as pointed out by this and other Clinics, the symptoms are usually atypical. Eternal vigilance alone will prevent its occurrence in these patients. Perforation with its direful sequence will steal upon them like a thief in the night and the family doctor must be always on the alert in anticipating, holding every abdominal pain, every attack of nausea and vomiting under suspicion until its innocence is proven. If occasionally an innocent (if such there be) appendix is bottled, provided it is skilfully done, the child is not harmed. I am not pleading for indiscriminate operating, but for a reasonable protection of these little patients whose lives are often the forfeit.

But for the adult, where the patient himself is not to blame, the physician should never be. Acute abdominal pain is always a clear warning because it is nearly always, if anything at all, surgical. The majority of the cases present the classical sequence of symptoms. But all patients will not clearly recite them. Adroit questioning is often necessary to elicit not only the sequence of symptoms, but even the symptoms themselves. To many patients, nausea or sick stomach means *actual vomiting*. A carefully elicited history is certainly of great assistance in the diagnosis of acute appendicitis.

In the presence of an attack of acute appendicitis, if the physician has carefully "briefed" the case to the patient and has met with refusal to accept operation the responsibility is then shifted from his to the patient's shoulders. It seems a stale repetition to say that the doctor should never compromise to the extent that he will say to the patient "you probably have appendicitis, we will treat you along for a while and see whether we cannot get you over this attack without operation."

In 80 per cent of the cases such advice will seem on the face of it to be right for the reason that just about that percentage will recover *apparently* completely from the first attack. But this advice is *only apparently* right since very nearly all will have subsequent attacks in each of which life will again be risked, to say nothing of morbidity.

To permit suppuration to occur causing either diffuse peritonitis or a localized abscess is a calamity which can be avoided only by promptness and decision on the part of the attending physician. The lesson presented in

a case like this reported above should be conned well by all of us. It is too disgracefully common. The penalty exacted, the price the patient pays, is very great. Adhesions are best avoided by being prevented. Aside from the danger to life, pus in the abdominal cavity is the most prolific source of adhesions which may or may not cause chronic invalidism by interfering with functioning. Wherever pus comes in contact with the endothelium of the peritoneum destruction to this delicate structure follows and whenever the endothelial layer is destroyed adhesions will most surely follow. The location of these adhesions will determine the extent and character of the damage—morbidity or death—which will occur.

As old as is the story of appendicitis it seems that the lesson of early operative intervention—intervention as measured by pathology, not time—will not be learned. Early diagnosis and immediate operation is the only way to avoid complications. "No nursing along" of cases of appendicitis.

DR. WM. H. BAILEY: *Tuberculous Mastitis.*

This case was sent to the Laboratory for a general laboratory work-out, and although none of the laboratory findings definitely prove our diagnosis, still with the previous medical history and the present symptoms, which always must be taken in consideration with the laboratory 'symptoms,' we feel pretty certain of our diagnosis of this case.

Patient, Mrs. G., married, mother of two children, was referred to us by her physician for laboratory work and we secured the following history: Patient usually well and strong, does her own house work without fatigue, has good appetite, and bowels regular, has had the usual diseases of childhood, has not had any severe ailment in last ten years, except one year ago, had a mass of enlarged glands removed from the axilla, which the Dr. at the time diagnosed with tuberculous. The patient does not run any temperature as far as she knows, has no shortness of breath, but does have night-sweats, two or three times a week but no cough or expectoration. Physical examination shows a medium sized, well nourished adult. Teeth have many decayed areas which need attention. At the present time, the teeth have given considerable trouble, especially after her first baby was born. Tonsils chronically infected and are the source of frequent sore throat. There is a swelling in her neck under right ear—about an inch diameter, which is very tender to touch and muscular movement, below this in

the neck about two inches, there is a still larger egg shaped mass along the sternomastoid muscle, which is about two and one-half inches in length, in the axilla there are two or three more similar masses. The right breast is considerably larger than the left. It is slightly tender to deep pressure, and is considerably heavier and firmer in its consistency. Palpation of the breast does not show any separate mass or nodules, which would have been suspicious of malignant growth. It gives the impression that the whole breast is the seat of some pathological process, rather than that there was any particular part effected. It feels the most like "caked" breast of a mother who is nursing her baby. The red blood count show low grade secondary anemia, hemoglobin 75 per cent red cells 3,800,000, the white count was 6,800 with a normal differential count. The urine shows no albumin or casts but would show a considerable increase in indican, which is very likely to occur in tuberculous cases.

It would, of course, be an easy matter under local anaesthesia, to remove one of the glands in the axilla without increasing the length of scar, which is already there. An examination of this would further confirm the diagnosis and might be a means of definitely establishing it, but the whole chemical picture is so clear that I believe this procedure is not absolutely necessary to establish the diagnosis of tuberculous mastitis in this patient.

DR. J. C. MACDONALD: *Sublingual Duct Obstruction.* A young woman comes in because of a swelling of the left lower jaw which has troubled her slightly for weeks, but for the past three days the mass has become larger and more painful.

She consulted a dentist, thinking she had an abscessed tooth, but upon x-ray examination the teeth were found to be in good condition so she was referred to me.

Examination shows a tumor the size of a small sized walnut with the skin over it somewhat reddened and the mass quite tender to touch. It is situated below the mandible just back of tip of chin. Due to its location I thought it to be a sublingual gland. The opening of the duct at the frenum of the tongue was slightly red and swollen. Upon withdrawing the probe from this duct, which was introduced with little difficulty, a very free flow of the secretion was effected. After repeating this probing of the duct a number of times, the tumor receded in size until it was scarcely noticeable and the pain was

greatly relieved.

Two days later the duct was again probed, using larger probes than were used at the first treatment and the gland was again emptied. The patient was to again report back for treatment two days later if the gland was still swollen but as she has not done so, I presume the condition has cleared up.

The stoppage of drainage from these glands are usually caused by a calculus or stricture but may be due to trauma. This case was apparently one of stricture as no calculus was palpable, but there was very little resistance met with in entering the duct.

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*Case of Chronic Diarrhea of Gastric Origin.* Patient female aged 65. Mother probably died of pernicious anemia. Father died at 68 of some pulmonary condition.

Had frequent attacks of tonsillitis up to age of 30. No rheumatic pains in early life but considerable trouble for last forty years. Attacks never severe enough to keep patient in bed. Both muscular and articular in character. Has had digestive disturbance, spitting up of food at times. No other trouble. Menopause at 51.

Present complaint. Diarrhea has been present for one year. Has not been relieved by all the various medication and treatments she has received. Bowel actions average four to ten per day. Are watery in character and never formed. Not accompanied by griping in abdomen. Has been largely on protein diet. Is afraid that vegetables increase the difficulty. Repeated stool examinations made by physicians have been negative. Kidneys act normally. Now has some pain in right shoulder. Weight loss 27 pounds.

Physical Examination shows fairly well nourished female. Temperature 98.4. Pulse 88. Pupils react promptly to light. Teeth—upper artificial. Lower some crowned and filled. Otherwise in good condition. Tonsils somewhat hypertrophied. Glandular system negative. Chest and heart negative. Slight tenderness over G. B. region. Liver and spleen not palpable. Some tenderness on deep pressure over ascending colon. Pelvic examination negative. Extremities negative. Reflexes OK. Blood pressure 132-80.

States further that she thinks she had gall bladder attack two years ago. Came on acutely and left soreness for several days.

Laboratory findings—Urine negative. Feces reaction neutral starch positive—otherwise negative. Second urine specimen showed sp.

gr. 1026—acid. Few hyaline casts. RBC 3,860,000. Hb. 65 per cent. Polys. 58. Small L. 373. Large L. 5. Transitional 3. Otherwise negative. Gastric analysis Free Hcl. O. Total 3. 2nd gastric analysis Free Hcl.—total acidity 3.5, including combined acid and acid salts. Ferments no rennin. Slight pepsin. X-ray of entire gastro intestinal tract negative.

The diagnosis in a case of this character has to be made by a process of exclusion. First we must determine that there is no local cause in the intestinal tract which might produce this condition. The absence of any sign or symptoms of an inflammatory condition and negative findings on repeated stool examination leads us to look elsewhere for a possible etiological factor. Pellagra and other conditions have to be considered to some extent. The fact that we are unable to find any cause for the complete absence of free hcl. acid should make us think of achylia gastrica per se. However we find that while the rennin ferment is present some pepsin ferment is still present. The presence of a small amount of acid as combined or acid salts does not exclude achylia gastrica. We do not know however that persistent diarrhea does exist in these cases of achylia gastrica and with this in view the patient was placed on proper diet with as much dil. hcl. in water by mouth, one and two hours after meals, as possible.

The results after three weeks treatment seem to justify our diagnosis of a chronic diarrhea due to achylia gastrica. Her stools are now somewhat formed and are not oftener than two or at most three times daily. Another gastric analysis will be made a week from now to check up the secretory functions of the stomach.

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#### PROCEEDINGS OF THE UNIVERSITY HOSPITAL CLINICAL SOCIETY OKLAHOMA CITY

DR. S. R. CUNNINGHAM:

1. *Case of double Legg's disease.* 2-4. *Three cases of Diaphysial Aclasis.* These are four atypical and unusual cases of bone deformity.

1. N. H., a boy 14 years of age, admitted to the hospital 8-20-23. Family history negative except as regards both hips.

About two years ago, patient noticed first symptoms. At first he noticed only a slight limp in left leg due to slight rigidity in left hip. Soon after that time he noticed a similar condition on the right side. A slight pain

was noticed in the hips only on forced flexion of thighs on abdomen. Patient says he early complained of inability to run. At no time did he have a rise in temperature. He has never had loss of appetite, loss of weight or pain at night.

Had he had at the onset slight rise in temperature, pain and night cries, loss of weight and appetite and inability to lie on his back with his legs extended as he does now, a diagnosis would have been made of tubercular infection of the hips. The skiagrams in the view-box show the extreme type of flattened head and neck. He will be kept in the double hip spica for several months.

2 & 3. Second and third cases: M. W., age 9, and F. W., age 11. These two girls present unusual features in bone changes affecting only the diaphysis of some of the long bones, unlike rickets in that it does not affect the



First Case—N. H.—Showing flattened heads of the femurs

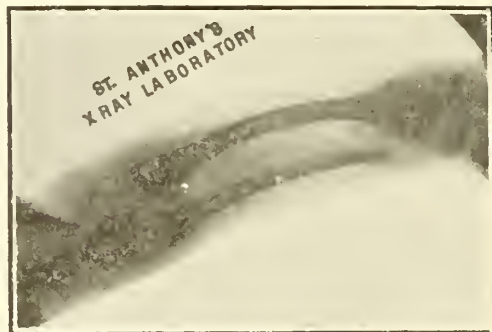
epiphysis of the long bones, or the flat bones, especially the skull—the fontanelles are normal. All the flat bones and ribs are normal and none of the long bones are bowed as would be the case in rickets. Physical examination is entirely negative, except for diaphysal exostosis and deformity. Their minds are fully developed—in fact they are both ahead of their years in their education.

4. The other case I will show is a nine months' old boy, fully normal in every particular except for a growth disorder in the bones of the left forearm and hand.

When the baby appeared for treatment three months ago, he presented the features you see in the skiagram in the view box. The index finger was ankylosed in complete abduction holding it across the back of the second, third and fourth fingers. The thumb was firmly ankylosed in complete dorso-extension, being held in superlative distance

from the fingers by extensive diaphysal exostoses. The forearm and hand were fixed in complete pronation by the enlargement of the diaphysis of the humeral end of the radius. He was unable to flex the thumb or fingers or to supinate the hand.

We removed the hindering overgrowth from the radius and removed the index finger and



Fourth Case—The forearm

the distal half of the second metacarpal bone. We also removed the proximal end of the metacarpal bone to the thumb, and forcefully adducted the thumb across the palm.

It is now three months since his operation and he can hold a spoon or pencil in his hand and can put his palm to his mouth.

*Discussion:* DR. WM. M. TAYLOR.

I have very little to add to what Dr. Cunningham has said. Have had the pleasure of looking over these cases, seemed very much as tho there must be some disturbance in calcium metabolism. During the last few years some new facts concerning the factor calcium metabolism plays, have been brought out.



Fourth Case—The hand

We do notice in mothers who have had repeated pregnancies, or even in some of those who have not had, show severe calcium metabolism disturbance, as evidenced by decay of teeth, falling out of hair, brittle finger nails, etc. It seems probable that infants born of such mothers would show some evi-

dence of such disturbance. We have looked these children over and the question arose as to whether or not we might accomplish anything by putting child on such a diet as would supply a liberal amount of calcium and iron, together with a liberal amount of fruit juices. To this we are adding liberal doses of calcium in the form of calcium chloride hoping some benefit may be derived therefrom, but feeling that perhaps the management in these cases has been delayed too long, tho not at all confident that early treatment would have availed anything.

DR. HEATLEY:

In the July International Survey of Roentgenology there is an abstract of paper on this condition. It is called Ollier's Diseases by the German. Ollier says it is a chondromatosis of the skeleton characterized by congenital affection of bones in their development distinguished by irregularity and delay in ossification. The cartilaginous tissue does not ossify and thus interferes with normal growth. These areas at the epiphysis have the appearance of osteo-cartilaginous tumors.

Wittek, in 1906, collected several cases and noted that the condition was often unilateral. The same observation was made by Frankenheim. Other observers have not found it to be unilateral. The condition is often noted as a familial occurrence.

Most observers except Virchow do not consider it dependent on rickets.

The extreme rarity of this condition and the difference of opinions of the different workers shows us that very little is known as to the cause, etc.

DR. LEROY LONG:

The case of this patient is somewhat unusual on account of bilateral involvement of the hips, but in my judgment, this is not at all inconsistent with a diagnosis of osteochondritis-deformans-juvenilis, or Leggs' disease. In fact, while we do not see a great many cases of this disease, I am under the impression that bilateral involvement is relatively more frequent than in tuberculosis of the hip.

Unfortunately, the pathology of Legg's disease is not very definitely understood, but it seems pretty clear that there is a vast difference between the pathology of Legg's disease and tuberculosis of the hip. In the former there seems to be a limited degenerative process associated with a flattened and broadened epiphysis and a shortened and broadened neck, without any very definite involvement of the joint surfaces. In the latter the disease, while beginning in the bone, quickly becomes a disease involving the joint surfaces.

The symptomatology, therefore, is markedly different. In Legg's disease there are limp and comparatively slight discomfort, and usually slight limitation of motion, but it is strikingly significant that the patient does not take any particular pains to protect the joint, apparently because he does not have pain. In tuberculosis of the hip, on the contrary, the patient has pain and rigidity in the early period of the disease, and he takes great pains to protect the hip from the irritation produced by weight bearing and motion. Again, it is the rule to have practical recovery in Legg's disease even when treatment is begun at a late period, while in tuberculosis there is never recovery with anything like normal joint function unless treatment is begun at an extremely early period.

The cases of these two little girls are of great interest to me since they present conditions of the skeletal structures that do not seem to be definitely classified. Since the pathology is so widely distributed without unpleasant subjective symptoms, such as pain and distress, it seems pretty clear that it does not depend upon an infectious agent. Since the pathology involves particularly the cartilaginous portions of the bones during the development period, it would seem reasonable to believe that it is associated with some interference with the normal transition from cartilage to bone. I believe that these cases may be properly classified as cases of chondro-dystrophia.

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DR. J. T. MARTIN: *A Case of Diaphragmatic Hernia of the Colon.*

J. E. H., well developed white male aged 50 complaining of (1) pain across upper right and left quadrants of abdomen for many years. (2) Pain in interscapular regions. (3) Constipation. States that he has had pain in the epigastrium for 30 years. This pain is often relieved by soda and by eating. He feels nauseated at times but has not vomited during this illness. Bowels move only when he takes cathartics. Stools are at times hard and lumpy and at other times soft. Occasionally sees bright blood in stools. Has a history of accidents about as follows: At age of 10 years, i. e., about 40 years ago fell out of back end of moving farm wagon hitting on left shoulder and fracturing left humerus. When 12 years old was kicked in breast by a horse. Was unconscious for one hour and not able to work for a year. When 18 years old fell from top of box car and struck on back on frozen ground. Was unable to leave his house for two months. At age of 20 he jumped from fast moving freight train and

tripped going over a 12 foot embankment sustaining fracture of clavicle and several ribs. For two years following this he was in poor health and unable to work. He began having cramp like pains in his stomach and would have smothering spells at night when he lay down. He has had numerous other accidents he says not quite as severe as those above.

The physical examination reveals very little. At one time we obtained tympany in the axillary space on the left side, which we did not interpret. The history of pain and distress relieved by soda and by eating is typically the pain of hyperacidity or ulcer with pyloric spasm. We sent him up to x-ray for gastro-intestinal series. The first picture shows (demonstrating plate) the esophagus, there is no obstruction to the barium meal. The interesting point is here in the third plate. Practically the entire transverse colon has penetrated diaphragm and entered the chest.

This man's complaint is that of stomach chemical pain, alkaline treatment and frequent feedings relieving him. There are several interesting questions. Is the pain due to filling and emptying of the colon acting as ball valve to stomach outlet, or is it a pyloric spasm due to hyperacidity? Is there a peritoneal covering of this hernia? Would surgical treatment of the hernia be advisable? From the history I would judge that the hernia dates from the accident he had at age of 20 years.

The physical findings are not constant. Sometimes percussion is as a normal chest, sometimes it is tympanitic. This is the first transverse colon I ever saw in the chest cavity.

*Discussion:* DR. LAMOTTE: This is a very interesting case. I would like to ask a question. When you take fluoroscopic views do you get paradoxical respiration? In a case that I had the fluoroscopic view of the diaphragm would go up instead of down with inspiration and could be seen very plainly.

DR. ALFORD: Along the line of Dr. La Motte's question, it would depend quite a bit on whether you get acute tenderness of diaphragm. If so you would have contraction of diaphragm as in a diaphragmatic abscess. The particular side of the diaphragm fixes itself. One side goes up distinctly. The well side goes up, and the fixed side goes down.

DR. MARTIN (*closing the discussion*): In regard to the excursion of the diaphragm one side was quite limited but not paradoxical. The inner side of the large dome of the dia-

phragm is indistinct but the outside seems to work in perfect rhythm.

DR. LONG: *A Case of Bilateral Lop-Ear*, which has been operated.

I am not on the program this evening, but the President has kindly given me the opportunity to present a patient who came on account of a pretty rare trouble—very marked Lop-Ear on both sides.

This girl is fifteen years of age, healthy, strong, well developed, intelligent. Lop-ears were present at birth. During early childhood various conservative attempts, such as strapping and apparatus about the head to hold the ears in position were tried, but did no good. The deformities are very noticeable, and she has reached the age when she is greatly embarrassed on account of the condition.

Both ears have been operated, and I believe that you will agree after you have seen the photographs made before operation that the appearance has been improved a good deal.

I wish to speak especially about the technic. The literature on the subject offers but little help. Lop-ear may be due to thin cartilage that does not support the auricle, or to very heavy, stiff cartilage that is "buckled" in such a way that the deformity is produced, and the technic of operation is governed largely by the type of cartilage. This case was of the latter type.

In the description of the operation found in the literature, one is directed that an ellipse of skin over the convexity of the deformity showed he removed, and a similar area of cartilage, being careful to not go through the skin on the anterior part of the auricle, after operating this patient, this place was tentatively tried, but it was found totally inadequate. Finally, a very large area of skin was removed from the back of the ear, and from the mastoid region practically into the hair line, and the cartilage was dissected out over an elliptical area extending from the base of the convexity to the top of the auricle. The margins of the cartilage were fixed by one or two catgut sutures, after which the skin on the anterior margin of the ellipse was sutured to the posterior margin on the side of the head. The top of the auricle was fixed by a suture to the side of the head temporarily.

I wish to emphasize the necessity of a very wide skin dissection extending backwards well over the mastoid region, and the removal of a large amount of cartilage extending entirely to the top of the ear.

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### EDITORIAL

#### VENEREAL DISEASE PROPHYLAXIS

Prevention of venereal diseases has one ob-  
stacle not to be met in the consideration of  
any others. That is the moral aspect or the  
impossible positions and situations assumed  
and attained by the moralists and those who  
insist upon the impractical and impossible  
handling of the matter. Forgetting that these  
infections are acquired accidentally, and in-  
nocently as well as by deliberate carelessness  
and thoughtlessness, these impractical volun-  
teer aids lend their hysterical advice to the  
end that the net results for good and coopera-  
tion lead nowhere and do no good whatever.

The United States Public Health Service,  
recently noting efforts of foreign countries to  
cope with this matter could not fail to note  
the disheartening effect of organizations cre-  
ated for the very purpose of aiding preven-  
tion, but who by assuming that any informa-  
tion relative to prevention was "encourag-  
ing immorality," defeated the very purpose  
of the work. They feared, that by giving  
information into the hands of the young and  
inexperienced that more exposure would en-  
sue, alleging too that such steps were immoral.  
The "clerical and female" element of Eng-  
land's National Council was criticised be-  
cause of their persistently ignoring preven-  
tative means. In one organization of Nation-  
wide scope the "moral and psychological"  
were stressed, in another the "physiological  
and pathological." Dissension arose over  
"personal disinfection." Some semblance of  
common sense in the work was finally  
reached when both sides surrendered some of  
their dogma and infinitesimal principles.  
When the war finally ended there were some  
very definite ideas as to the best course to  
follow. Infection in the (English) army at  
Constantinople fell from 228 per thousand in  
1921 to 83 the next year. At Portsmouth in  
February 1917 a treatment center was opened.  
During the first year 352 patients applied,  
this increased 91 per cent, in 1919, 62 per  
cent, the following year, when the policy of  
self-disinfection was adopted which dropped  
the infections in the last half of the year to  
13 per cent. In 1921 there was a further  
decrease to 12 per cent. In 1922 Sir Leslie  
McKenzie stated it was absurd to say there  
was danger in teaching every teachable per-  
son that venereal diseases are due to a defi-  
nitely known germ, that as long as it lies on  
the surface it can be removed without much  
trouble by mild disinfectants, or mechanically  
by soap and water, but that later after enter-  
ing the body by any channel, destruction was  
difficult. Lord de Broke found a slight de-  
crease in incidence which coincided with the  
time the public was taught self-disinfection.  
The observations and conclusions would fill  
volumes, but the gist of the matter seems to  
be that common sense demands that com-  
batting these infections may best be carried  
out by overlooking nothing which will accom-  
plish the result. It seems to the writer that  
it should be obvious that those who may be  
reached by moral suasion and preachments  
will need no other aid, for they will, in the  
main remain uninfected, while on the other  
hand those who heed not any and all warn-  
ings are going to benefit most by acceptance  
of chemical and physiological prevention.

## JUSTICE SHOULD RULE

A recent editorial in the Journal was very timely and of real worth. This article which dealt with society membership hit at some very unjust things that are being done in some of the societies. Every respectable physician wants to belong to his county society, but sometimes he meets with great obstacles in getting in, and this is particularly true in some of the smaller county organizations.

It would appear that occasionally some county societies are under the impression that a newcomer should not be admitted if possible to keep him out, and there are instances where a new man in the county always had to undergo quite a lot of bother, before he was admitted. The most minor infringement of the Code would be the excuse to either deny him admission, or else cause postponement of action on his application.

The constitution and by-laws of the State and County societies very specifically state what method should be adopted in cases of this character. The hand of goodfellowship should be extended to him, and he should be made to feel that he is welcome, so long as he is decent. Every member of the society should endeavor to help the man if he is inclined to go wrong. They should go to him and talk frankly to him about his actions, and tell him how the physicians feel toward him, and his manner of doing business. Many a good man has been driven into unprofessionalism just because the other doctors put up a fight on him. It is a cowardly pup who won't fight for his rights, when he is attacked. In many instances the county society, instead of helping the fellow seems to be just "laying for him." If all attempts fail to alter the man's ways, why then there is no more to be done; but the society will have done the square thing and is free from the suspicion of unfairness.

Instances have happened whereby a man who stood high in the profession of his county, moves to another county, sends in his transfer card, and he is then either denied admission or his card is held up for future action. I have known this to happen to a man who was secretary of his county society, before his transference. This is wrong to the man and to the profession. If he had gone wrong in the few weeks interval he should have been told so, and the reason explained to him for the action in holding his application in abeyance.

The unjust manner in which men are kept out of societies is not only detrimental to the

man but to the profession at large. It is the desire of the American Medical Association that every man, in every county who can be made reputable should be approached and all endeavors made to bring this about. The county society is only a unit of the State organization, and all its acts are subject to review by the Council of the State society. If the action is not just the county society suffers in that it will be compelled to deal fairly and for the best interests of the whole profession, and what is best for the whole profession is best for the local society.

G. A. WALL, M. D.

### *Editorial Notes—Personal and General*

DR. R. W. JOHNSON, Oklahoma City, has removed to Mustang.

DR. W. R. BUTLER, Maud, has located at Crystal City, Texas.

DR. J. S. McFADDIN, Hollis, recently attended the clinics at Chicago.

DR. J. M. BYRUM, Shawnee, recently attended the clinics at Chicago.

DR. H. B. JUSTICE, Tulsa, is recovering nicely from an operation performed recently.

DR. J. V. BLAIR, formerly with the University Hospital at Oklahoma City, has located at DeNoya.

DR. and MRS. A. J. BRACE, Vici, announce the arrival of Jane Elizabeth, born February 27th, weight 12 lbs.

DR. THOMAS A. LOVE of Ripley is a new member of the State Association and of his County Society.

DR. N. W. CAMPBELL, Poteau, has removed to Oklahoma City, where he is attached to the U. S. Veterans Bureau.

DR. W. E. FLOYD, Muskogee, was recently called to Meridian, Miss., by the death of his father, J. C. Floyd.

DR. L. A. MITCHELL, Frederick, was recently called to Haleyville, Ala., on account of the serious illness of his father.

DR. W. E. SIMON, Alva, lost his father, E. C. Simon through death, which took place February 21 at Garrett, Kansas.

DR. and MRS. T. O. CRAWFORD, Dewey, have returned from New Orleans, where the Doctor has been attending a school.

DR. W. N. DAVIDSON, Cushing, has recently taken the examination for a commission in the medical Officers Reserve Corps.

DR. T. H. McCARLEY, McAlester, recently attended the meeting of the American Congress of International Medicine at St. Louis.

DR. R. E. SAWYER, Durant, and family have returned from a several weeks' vacation trip to San Antonio, Hot Springs and other points.

MAJOR R. B. HILL, M.D., U. S. A., Executive Officer of the 320th Medical Regiment, visited at Alva with the Reserve Officers and National Guard, on March 25.

STEPHENS COUNTY MEDICAL SOCIETY met at Duncan, March 4, with a good attendance and an interesting program, followed by a banquet at which the doctors' wives were present.

TULSA ACADEMY of Eye, Ear, Nose and Throat held its monthly meeting March 17th and elected as new officers for 1924: Dr. J. Walter Beyer, President; Dr. Ruric N. Smith, Vice President, and Dr. W. A. Huber, Secretary-Treasurer.

DR. RALPH E. WELLER, Electra, Texas, asks the Payne County Secretary to accept his reinstatement fee of \$6; and is quoted as saying "I always felt more comradeship and enjoyed the association with the Payne County men more than with any other fraternity of physicians."

DR. W. A. LACKEY, Oklahoma City, is having difficulty in diagnosing an apparently new ailment. Dr. Lackey is School Physician, and says the disease effects teachers only on Mondays, leaving them perfectly well and strong by the following Friday. Sixty-five teachers were out one Monday recently, of whom about 20 were ill with acute colds.

CLEVELAND COUNTY MEDICAL SOCIETY met and elected the following new officers for 1924: Dr. J. M. Williams, Norman, President; Dr. J. L. Day, Norman, Vice President; Dr. B. H. Cooley, Norman, Secretary-Treasurer, and Dr. G. W. Wiley, Norman, Censor. Drs. Cooley and W. T. Mayfield, Norman, were elected delegates to the state convention.

DR. CHARLES R. HUME, Anadarko, is celebrating the golden anniversary of his entrance into the medical profession, of which 33 years were spent in practice in Oklahoma. Dr. Hume was President of the State Association in 1917, and settled at the Kiowa and Comanche Indian Agency at Anadarko, coming from Caldwell, Kansas, in 1891. Before coming to Oklahoma, Dr. Hume practiced his profession for seven years in Ohio and ten years in Kansas. He was born near Rochester, N. Y., in 1847, reared in Michigan, and graduated from the University of Michigan in 1874.

CUSHING COUNTY MEDICAL SOCIETY met March 11th, and enjoyed the most profitable meeting that has been held in a long time, every member from Cushing being present. The program was opened by Dr. H. C. Manning with an excellent discussion of "Head Injuries," followed by Dr. Benjamin Davis with a complete paper on "The Nausea and Vomiting of Pregnancy." Dr. E. M. Harris reported a very interesting case history. Everyone present entered into the discussion of the subjects. Visiting members were present from Quay, Yale, Ripley and Stillwater. The Cushing Society furnished the "smokes."

The next meeting will be held at Yale, with Dr. W. B. Hudson functioning as Master of Ceremonies.

DR. J. E. FARBER, Cordell, member of the State Board of Examiners, is spending the months of February and March in post-graduate work at New Orleans.

DR. J. ANGUS GILLIS, Frederick, is recovering from a severe illness, which prevented him from attending the recent session of the Masonic grand lodge for the first time in eleven years.

McINTOSH COUNTY MEDICAL SOCIETY met at Eufaula March 18, and presented the following program: "Pneumonia," general discussion; "Contagious Diseases, Care and Control," discussion opened by Dr. J. H. McColloch, County Superintendent of Health; Clinic.

DR. HUGH SCOTT, Commanding Officer of the U. S. Veterans Hospital, Muskogee, has suggested that ambitious republicans submit their claims to the nomination for United States senator to the state convention; this has at least the merit of economy, and would enable the party to express disapproval of the pernicious primary system.

STEPHENS COUNTY MEDICAL SOCIETY started the Cancer Month campaign with a program March 4, at Duncan entitled "A Symposium on the Diagnosis of Cancer and How to Differentiate it From Other Diseases." Later in the campaign five minute talks were made before all the churches, clubs and societies. The Campaign was closed with a free clinic.

LOGAN COUNTY MEDICAL SOCIETY met March 11, at the home of Dr. C. B. Barker, and elected the following new officers for 1924: Dr. H. W. Larkin, Guthrie, President; Dr. Dan Gray, Guthrie, Vice President, and Dr. William C. Miller, Guthrie, Secretary-Treasurer. Dr. Gray was named as delegate to the State Association, with Dr. L. A. Hahn alternate. A program committee has been named and the new officers will arrange a program that will be interesting. Regular meetings are held the second Tuesday of each month.

DR. J. M. BYRUM, Shawnee, recently attended a meeting of the Council of Medical Education of the American Medical Association at Chicago, also a meeting of the Federal Medical Boards, of which the Oklahoma Board is a member. Dr. Byrum urged more uniformity in the endorsement of reciprocity between the states. He believes that reciprocity is largely a matter of individual credentials and that if an applicant is in possession of standard credentials, and has original grades of examination before any Board in the United States, he should upon proper endorsement from that Board, be entitled to reciprocity license in any other state. Dr. Byrum also urged a more united effort to guard against fake medical diplomas.

**DOCTOR JOHN FERGUSON McARTHUR**

Death claimed Dr. J. F. McArthur Saturday morning, March 8th at his home at Wilburton, Okla. He had been in bad health for some time, having recently undergone treatment in an Oklahoma City Hospital. He appeared to be on the road to recovery, however, and was down town and in his office shortly before he was stricken when the end came almost without warning.

Funeral services were conducted at the home Monday afternoon at 2:30, Rev. Bryce pastor of the Methodist Church officiating. Interment was at the City Cemetery under the auspices of the Knights of Pythias Lodge of Wilburton. Dr. McArthur was an ardent Knight and loved his fraternal organization.

Dr. McArthur was born in Henrietta, Ohio, May 1st, 1857 and came to Wilburton in the winter of 1904 and has practiced his profession here ever since. He graduated from the Kansas City Medical College in 1893. He was Local Physician for the Rock Island and was County Health Officer. He has held the office of Secretary of Latimer County Medical Society for a number of years and was a member of the State and American Medical Associations.

Besides his wife he leaves one son and one daughter, Attorney C. L. McArthur of Duncan, Oklahoma, and Mrs. Sheegogg of Wichita Falls, Texas.

The people of Latimer County in general and the members of the Latimer County Medical Society in particular regret the passing away of their friend and colleague.

**GENERAL SURGERY**

Edited by G. A. Wall, M. D., F. A. C. S.  
303 Palace Building, Tulsa

**SURGICAL POSSIBILITIES IN TRAUMATIC RUPTURE OF INTESTINE.—A. L. Lockwood (Canad. Med. Assn. Jour.)**

A. L. Lockwood presents his views on this subject in the following instructive conclusions: 1. The extent of the injury to the abdominal wall is no indication of the amount of damage to the viscera. 2. It is practically an undisputed fact that complete rupture of the intestine, not operated upon, is invariably fatal. 3. The small bowel is involved much more frequently than the large, in the proportion of nine to one. The rent is usually transverse, and multiple rents occur in one out of every five cases. 4. Bearing in mind that after rupture of the small bowel the mucous membrane generally everts through the rupture and tends to prevent leakage and that peristalsis is inhibited for approximately six hours, operation not delayed beyond six hours gives by far the best chance of recovery. 5. The death rate has been over 70 per cent. Only by early diagnosis and operation as soon as the patient can stand the surgical interference, can the mortality be reduced. The mortality should not be more than 40 to 50 per cent. in civil accidents. 6. The early symptoms of com-

plete rupture of the intestine are few, but very characteristic. 7. If the abdomen is distended and the liver dulness absent operation is of little value. 8. Last resort surgery in such cases is of no value, in fact, takes away the only chance the patient has. Advocate intervention even in doubtful cases, though it may be purely exploratory. 9. In all cases whether the diagnosis is doubtful or not, bear well in mind that the important question to decide is not—"Is there a rupture of the intestine?" but "Is there an intra-abdominal lesion sufficiently serious to require operation as soon as the patient's condition will permit it?" 10. The profession generally should thoroughly appreciate that if a man is kicked in the abdomen or otherwise injured there, even though he may not appear acutely ill at the outset, and if he complains of persistent pain, he should be sent to the hospital or at least kept under hourly observation until all danger of a ruptured intestine is passed.

**MYOMATA OF THE UTERUS IN PREGNANCY.**

—Litsenberg, Jennings C. Surg. Clinics, Oct. 1923, 1285.

The author gives an analysis of cases, and inquires as to when shall we operate upon women with myomata complicating pregnancy. In a paper too long to abstract fully, he has given us a very exhaustive article taking up the frequency of myomata and their interference and effect on pregnancy, and gives his conclusions as follows:

While myomata in the pregnant uterus is common, it is seldom dangerous as a complication of pregnancy, labor of the puerperium, and still less often require surgical interference. However, a few cases require operation on account of size, rapid growth, location in the lower segment, incarceration in the pelvis, pressure symptoms, threatened abortion or when accompanied by a contracted pelvis. To determine which exceptional cases should be operated on demands acute obstetrical and surgical judgment, therefore no operation for myomata in the pregnant uterus should be undertaken without the opinion of an experienced obstetrician.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
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**AN ANATOMICAL AND X-RAY STUDY OF THE OPTIC CANAL IN CASES OF OPTIC NERVE INVOLVEMENT.—White, L. E. Boston M. & S. J., 1923, clxxxix, 741.**

In an attempt to determine the reason for recovery in some cases of optic nerve involvement and loss of vision in others White had roentgenograms taken of many skulls to determine the size and conformation of the optic canal. Patients with old and recent nerve involvement and twenty-five normal persons were studied in this way.

In the skulls of forty stillborn infants it was found that the canal was of the same diameter as in adults but was very short. In the cases of normal persons only five canals were oval. The average diameter was 5.35 mm. In the twenty-five cases in which the nerve was involved there were twenty-six oval canals. The nerve was involved in nineteen of these and in twelve of the twenty-four round canals. Twelve of the subjects with oval canals were operated upon; one

recovered. In the cases not operated upon there was no improvement. Of the ten persons with round canals, one recovered without operation, six were subjected to intranasal operations, and three were subjected to tonsillectomy.

The author reaches the conclusion that in cases of severe optic nerve involvement with an optic canal of 4 mm. the opening of the posterior sinuses is indicated. When the canal measures 5 mm. the nerve will recover spontaneously or following local nasal treatment.

#### BACTERIOLOGICAL OBSERVATIONS ON ACUTE TONSILLITIS WITH REFERENCE TO EPIDEMIOLOGY AND SUSCEPTIBILITY.—Bloomfield, A. L., and Felty, A. R. *Arch. Int. Med.*, 1923, xxxii, 483.

The authors used as subjects for study 200 young women who were members of the training school for nurses of the Johns Hopkins Hospital.

On the basis of their own experience and the reports in literature, the authors assumed that acute tonsillitis is usually an infection caused by haemolytic streptococci of the beta type. This supposition was confirmed. The plan of study was as follows:

1. A detailed survey of the experimental group for haemolytic streptococci at a time when no acute streptococci disease was present.

2. A bacteriological study of cases of tonsillitis occurring in the group subsequently, in order to determine whether: (1) tonsillitis is an auto-genous infection due to a strain of streptococcus previously carried by the host, and if so, what factors lead to the seasonal outbreak, or whether (2) tonsillitis is an exogenous infection due to some external strain or strains.

3. The determination of the relation of carriers and contacts to the spread of tonsillitis in the group.

4. The determination of the relation of the season, weather, other infections, etc., to the outbreak of tonsillitis.

5. General epidemiological observations to define the epidemic and sporadic disease.

The findings with regard to the bacteriology and the relation of tonsillitis to previous carrier states is as follows:

1. Acute tonsillitis was invariably an infection with beta haemolytic streptococci.

2. The disease affected almost uniformly a group of persons who were not previously carriers of this organism.

3. Only one of the carriers who were equally exposed developed acute tonsillitis.

4. No special clinical or bacteriological association could be demonstrated between successive cases of tonsillitis in the group.

The authors present evidence that an extensive outbreak of tonsillitis is not a true epidemic but only a group of sporadic cases. Tonsillectomy protects against acute streptococcal infection of the lymphoid tissue of the throat.

#### RADICAL OPERATIONS ON THE MAXILLARY SINUS AND DAMAGE TO THE TEETH.—Ivy, R. H. *Ann. Otol. Rhinol. & Laryngol.*, 1923, xxxii, 1197.

In cases of chronic inflammation of the maxillary sinus nothing short of a radical operation will suffice. Nasal puncture and lavage will clear up most of the acute cases, but where the mucous membrane has been chronically thick-

ened and the seat of polypoid degeneration, with or without bone necrosis, mere washing out through needle or canula from the nose has little effect. This measure may establish a diagnosis if free pus is present but may entirely fail to do so when the disease is manifested chiefly by the presence of solid granulation tissue. In long standing cases nothing is more satisfactory than a good exposure of the sinus by an opening through the buccal wall. Some operators state that the radical operations result in permanent damage to healthy teeth in the vicinity of the buccal incision.

The author made a study of the teeth in a series of 20 postoperative cases which had been subjected to radical maxillary sinus operations at periods ranging from three months to two years after the operation. The information was gathered by questioning the patient, testing the teeth by means of the faradic current and radiographic films. Practically all of the patients noticed a numbness in the teeth and gums beneath the incision, which lasted for only a few weeks in some to a year in others.

In practically all cases tested several months after operation absolutely normal faradic reaction was observed in the teeth, indicating regeneration of the lost segment of the nerve.

Fears of deleterious effects to the teeth from radical maxillary sinus operations performed by competent operators are entirely unfounded. If occasional damage did occur this should not condemn a valuable operation.

#### OTITIC CHOLESTEATOMATA.—Smith, S. MacC. *Ann. Otol., Rhinol. & Laryngol.*, 1923, xxxii, 1203.

The temporal bone is considered the historic and legitimate habitat of cholesteatomata but cases have been reported in other osseous structures.

Cholesteatomata vary in size from that of a small pea to a walnut. They are usually round but the contour is governed by the shape of the cavity.

Except for occasional mild attacks of vertigo and headache, cholesteatomata may remain in the temporal bone for years without causing symptoms.

In order to secure permanent relief, cholesteatomata must be removed in their entirety so far as this is possible. The objects to be obtained after the removal of the mass are cessation of the discharge and cessation or limitation of pathologic proliferation. Skin grafting as practiced by Dench, after Ballance, seems to give satisfactory results. For those not skilled in this procedure, packing the cavity with small strips of gauze thoroughly moistened with a 1-1000 or 1-500 solution of acriflavin will prevent the recurrence of cholesteatomata in many cases. The packing is renewed at first every day, then every third or fourth day until all evidence of further discharge or proliferation has ceased. Should there be evidence of recurrence afterwards a 1 per cent solution of mercurochrome is superior to acriflavine.

The author reports an unusual and interesting case of cholesteatomata, when removed approximated in size a small pear.

## ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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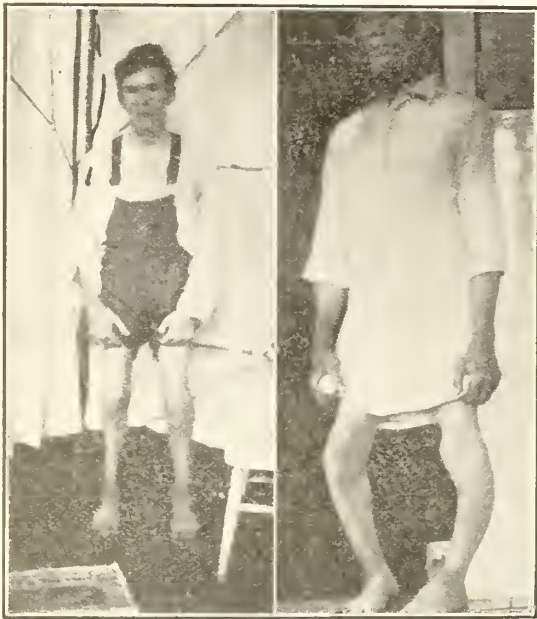
### 1. CLINICAL CASE REPORT. BOW LEGS.

H. McG. White boy. Age 14. Admitted to the Clinic November 30, discharged February 1st, 1922.

This boy came to the Clinic because his legs were so badly bowed that all the boys continually made fun of him. His father stated that his legs have been badly bowed since he had typhoid fever when he was four years old. When the boy began to walk afterwards, the legs became markedly bowed. There has been no change in his condition since he was five years old. He has four sisters and two brothers but there is no history of other deformity.

On examination we find a well developed lad except that his legs were very badly bowed immediately below the knee. The femurs seem to be normal. The X-ray shows the inner condyle of each tibia to be partially missing. The angle of greatest deformity is immediately below the condyles of the tibia.

Operation. Ether anesthesia. Osteotome was inserted on the inner aspect of tibia at point of



After and Before Treatment

greatest angulation. Tibia was fractured, osteotome was then inserted in the same level in the outer aspect of the leg and tibia fractured. Legs were then straightened and a double spica applied from toes to the pelvis, by the use of the Hawley Table. At the end of four weeks he was stood on his feet for ten minutes daily while still in plaster cast. January 15 casts were entirely removed and he was instructed in walking. Six months later his legs were still straight and there was no sign of relapse.

#### DISCUSSION:

Bow legs is the most frequent distortion of the lower extremities. From the surgical standpoint

it is of little consequence. From the aesthetic it means everything to the afflicted individual. It is popular belief that bow legged children will always outgrow the deformity. Physicians themselves often give this advice to the parents. It is true that many outgrow the deformity but it has been found on close observation that about one in five male adults have bow legs. Whitman first pointed this out in 1887, so that granting that nature in itself is very effective in overcoming the deformity, extreme cases should certainly receive treatment because this deformity is so unpleasant to the adult. The treatment in slight cases may consist only of proper manipulation and the sole of the shoe may be raised on the outer border. Braces may be applied to the light cases and if persistence in adjustment is insisted upon very good results can be obtained. Operative treatment is reserved for the more severe cases. Constitutional treatment in case of rickets of course is necessarily important.

### 2. ORTHOPEDIC PRINCIPLES. From Arthur Keith's "Menders of the Maimed." William John Little, 1887.

Wm. John Little was the pioneer of Orthopedic surgery in England. He lived in the same age as Frederick Stromeyer of Hanover and Delpeck of Montpellier, both of whom were also pioneers. Little was himself afflicted with a club foot, due to infantile paralysis and it is due to his great desire to investigate his own case that the practice of tenotomy became so popular in England. He also made a special study of muscles, tendons and ligaments, which gave him an understanding of cerebral spastic paralysis, better known as "Little's Disease."

Delpeck refused to operate on Little's foot because of his fear of sepsis. Later Little went to Hanover and came in touch with Stromeyer who had developed the new operation of subcutaneous tenotomy. He was operated by this method and later returned to England very enthusiastic about the possibilities of tenotomy. Previous to his time, the medical world had failed in producing a successful treatment of club foot. Heat and rubbing were employed but generally with failure, and such cases were neglected. During his early enthusiasm for relieving the deformed he was instrumental in establishing the Royal Orthopedic Hospital, in London, where his son has long been chief of staff.

## OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M. D.

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### A SKIN TEST FOR SUSCEPTIBILITY TO SCARLET FEVER.—George F. Dick and Gladys Henry Dick, J. A. M. A., Jan. 26, 1924.

Pure cultures of hemolytic streptococcus isolated from a case of scarlet fever have been used to produce experimental scarlet fever. This culture was filtered through a Berkefeld filter and a 1:1000 dilution of the filtrate in sterile salt solution was used. 0.1 c.c. of this solution was injected into the skin of the anterior surface of the forearm—as in making the Shick test. The test was made in sixty-five convalescents from scarlet fever; sixteen persons with a history of scarlet fever and seventy-two with no history of scarlet fever. Positive results as determined by

varying degrees of reddening and swelling about the site of the inoculation in eighteen to thirty-six hours—were obtained in 41.6 percent of the persons who had no history of scarlet fever. All the convalescent cases showed negative or only slightly positive results. Of those giving a history of scarlet fever, only one was positive—and the history of his having actually had the disease was not clear. From these experiments it is concluded that the test bears a specific relation to immunity to scarlet fever.

**TREATMENT OF EARLY HEREDITARY SYPHILIS WITH INTRA-MUSCULAR INJECTIONS OF SULPHARSPHENAMIN.**—F. H. Boone and A. A. Weech, *Amer. Journal of Diseases of Children*, Jan. 1924.

The report is based on twenty-one cases, all of whom were less than one year of age. In all except one the diagnosis was confirmed by Wassermann tests. Sulpharsphenamin was found to be safe and easily administered in a dosage of 20 mg. per kilogram of body weight. The reactions, either local or general, were very slight. In 55 per cent of the patients the Wassermann reaction became negative after one course of six treatments. The symptoms rapidly disappeared and the general condition of the patients quickly improved.

The method used is to give a dose each week for six injections. A rest period of two months is allowed between courses, during this time mercury inunctions are used. Three complete courses are recommended after a negative Wassermann reaction is obtained. To avoid local reactions all the solution must be given into the muscle and none into the subcutaneous tissue. A sharply pointed needle of fine bore (No. 22) is used with a 2-c.c. Luer syringe. The solution to be injected is usually less than 1 c.c. in volume. This is drawn into the syringe and the rest of the syringe filled with air. The site (usually the gluteal muscles) is cleaned with iodine and alcohol and the needle is wiped with dry sterile gauze. The needle is plunged directly into the muscle. The injection made and the last drops forced out by forcing the air into the muscle. The needle is withdrawn slowly to allow the tissues to contract and prevent return of the solution along the needle track.

**REASONS FOR THE FAILURE TO OBTAIN RELIEF AFTER TONSIL AND ADENOID OPERATIONS.**—I. H. Goldberger, *Archives of Pediatrics*, Nov. 1923.

Sinusitis is a disease common in children and may occur at any age. Children whose catarrhal conditions of the upper respiratory tract do not subside after tonsillectomy and adenoidectomy or who are operated upon for the return of adenoid growth probably have sinus disease. There are two forms, catarrhal (the most common) and purulent. The antrum is most commonly involved. After upper respiratory infections (cold, gripe, etc.) and after the acute eruptive fevers, measles and scarlet fever particularly, children should not be discharged till all signs pointing towards sinus involvement have subsided. After tonsillectomy and adenoidectomy children should return at periodic intervals to ascertain the condition of the sinuses. Diagnosis rests upon the history of previous events, roentgenograms, transillumination, and exploratory puncture. Treatment

is usually conservative. Suction is favored by most men. The consensus of opinion is that operation should be resorted to only after all other procedures have failed.

**THE ACIDITY OF THE GASTRIC CONTENTS OF CHILDREN.**—W. McKim Marriott and Leonard T. Davidson, *Amer. Journal of Diseases of Children*, Dec. 1923.

The amount of acidity of the stomach contents of sick infants—including cases of otitis media, pyelitis, pneumonia, osteomyelitis and bacillary dysentery—was found to be many times lower than that in normal infants—all being breast fed.

Cows milk contains a large amount of "buffer" material that is capable of neutralizing a considerable portion of the acid of the gastric juice. For this reason it cannot be tolerated in the same strength as breast milk. Especially is this true in malnourished infants or those suffering from acute infections. Undiluted whole lactic acid milk contains enough lactic acid to neutralize a considerable portion of the "buffer" substance. For this reason it is tolerated in the same strength as breast milk. This has been found true in sick infants as well as those in normal health. A certain amount of acid concentration is necessary for peptic digestion of protein to take place properly. This was found to be insufficient in most cases of babies suffering from infectious or nutritional disturbances when on the breast or fed sweet cows milk. It was sufficient in a fair proportion of sick infants fed on lactic acid milk. Even normal infants fed on whole sweet cows milk showed insufficient acid concentration for peptic digestion.

In selecting a food for young infants it is important to take into consideration the "buffer" or acid binding qualities. Whole lactic acid milk does not neutralize the acid of the gastric juice to any more extent than does breast milk.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.  
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**DIETARY REQUIREMENTS FOR REPRODUCTION. THE EXISTENCE OF A SPECIFIC VITAMIN FOR REPRODUCTION.**—Barnett, Sure, *Journal of Biological Chemistry*. (January 1924).

From the experimental data presented it is concluded that lack of fertility or significant success in rearing of young on milk diets must be attributed to a dietary factor other than protein, the fat-soluble vitamin "A," the antirachitic vitamin, or the water-soluble vitamin "B." The author concludes that there exists, in addition to the antixerophthalmic, antirachitic, antiberi-beri, and antiscorbutic vitamins, another hitherto unrecognized vitamin, that is essential for reproduction, which becomes evident only in breeding experiments where rations composed of purified food substances are employed.

This reproductive vitamin has been found to occur in Georgia velvet bean pod meal, polished rice, yellow corn, and rolled oats.

**UNIFORM NOMENCLATURE FOR BLOOD COUNTING.**—By Major R. E. Scott, Medical Corps, U. S. A., and R. W. French, Laboratory Service, Walter Reed General Hospital, Washington, D. C. The Military Surgeon, October 1923. Vol. 53, No. 9.

On account of the many variations in differential blood reports occasioned by different leucocytic nomenclatures in vogue, an effort has been made to standardize such work and to use a standard classification in keeping with the more recent work in cytological pathology, embryology and physiology.

Under normal conditions the following types of leucocytes are recognized under the standard nomenclature:

- Small mononuclears (lymphocytes).
- Large mononuclears (endothelial leucocytes).
- Polymorphonuclear neutrophiles.
- Polymorphonuclear eosinophiles.
- Polymorphonuclear basophiles.

While under pathological conditions any of the following forms may be found:

- Lymphoblasts (embryonic lymphocytes).
- Neutrophilic myelocytes (embryonic polymorphonuclear neutrophiles).
- Eosinophilic myelocytes (embryonic polymorphonuclear eosinophiles).
- Basophilic myelocytes (embryonic polymorphonuclear basophiles).
- Myeloblasts (embryonic myelocytes).
- Normoblasts (embryonic erythrocytes).
- Megaloblasts (embryonic normoblasts).

Under normal and physiological conditions the number of leucocytes per cubic millimeter of the blood may vary between 4,000 and 12,000, possibly as high as 15,000 at times, without true pathological conditions existing. Bathing, digestion and exercise will induce a considerable increase. According to these figures the differential count will normally remain within the following limits:

- Polymorphonuclear neutrophiles, 65 to 72 per cent.
- Polymorphonuclear eosinophiles, 1 to 2 per cent.
- Polymorphonuclear basophiles, 1-4 to 1-2 per cent.

- Small mononuclears, 20 to 30 per cent.
- Large mononuclears, 4 to 10 per cent.

Of the several results from a blood count, the differential count undoubtedly gives the more information.

Of the polymorphonuclear cells, the neutrophilic is of the greater importance, as the ratio of these cells, both in the peripheral blood and in the tissues, serves as a valuable index in pyogenic infections. An increase of the neutrophiles with an absence of eosinophiles indicates sepsis, while the presence of eosinophiles indicates either a chronic condition or resolution. This is especially valuable in diagnosing septic conditions, the progress of infections and in post-operative conditions. A total leucocyte count, however, is necessary to fully appreciate the true pathological condition. This is particularly necessary to realize the amount of body resistance being shown.

The presence of any of the pathological forms of the blood cells in the peripheral blood indicates an increased activity of the blood-forming organs and the more embryonic the cells, the more acute the process and the less favorable the prognosis. The leukemias may be looked upon as nothing more nor less than a fluid tumor in which the constituent cells of the tumor are being carried thruout the system in the blood stream.

Erythrocytic Changes.

While making a differential count the recognition of any changes in the red cells is also essential. In this work the following types of degeneration are recognized:

Polychromatophilia (change in staining reaction).

Basophilic stippling (change in staining reaction).

Achromia (loss of hemoglobin per cell).

Anisocytosis (variations in size).

Poikilocytosis (variations in shape).

These various degenerations, given in order of importance, all indicate a certain drain on the blood, and, varying in degree, may serve to indicate a true disease of the blood forming organs.

The nucleated (embryonic) erythrocytes are not common in the circulating blood and their presence always has a pathological significance, either indicating a greatly increased (sudden) activity of the blood forming tissues or a chronic drain which the system is not able to overcome. In certain post-operative conditions the presence of nucleated red cells may be a good sign in that it indicates an activity of the bone marrow in replacing destroyed cells, and the quick repair of surgical damage.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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**PHTHISIOGENESIS AND LATENT TUBERCULOUS INFECTION.**—Eugene L. Opie. The American Review of Tuberculosis. Sept. 1922.

The lungs of practically all adults show evidence of tuberculosis mostly in childhood. Calcified focal lesions in the substance of the lung and in the adjacent lymphatic nodes are usually found in autopsies on those dying from phthisis. These focal lesions which become encapsulated and tend to heal convey a relative immunity which may always be overcome by massive infection or adverse conditions. This immunity disappears after the lesion has healed. "Only the tuberculous animal is immune."

The apical tuberculosis of adults resembles the second infection of experimental animals. Tuberculosis introduced among people not suffering from it before more nearly resembles the first infection of experimental animals and causes massive caseous pneumonia involving whole lobes with enlarged and caseous bronchial lymph nodes and with little tendency to form fibrous tissue.

Phthisis in most cases is not the result of an infection acquired in childhood. The statistics concerning the incidence of tuberculosis among physicians and attendants in tuberculosis sanatoria, and those regarding marital tuberculosis do not disprove the possibility of adult infection. The long latent period between exposure and the development of recognizable symptoms tends to obscure the relation between infection and the disease.

The evidence available at present indicates that infection usually takes place thru the air passages. Intestinal tuberculosis occurs in young children and seldom arises in adult life. It is easily produced in young animals by feeding but with difficulty in adult animals.

Civilized races are permeated with tuberculosis and this permeation is their chief protection. Fur-

ther knowledge of the relation between focal infection and phthisis may result in the prevention of fatal tuberculosis.

**JUVENILE TUBERCULOSIS.**—John B. Hawes, 2nd. The American Review of Tuberculosis.

Children with tuberculosis may be divided into three groups: (1) Those who have a tuberculous infection causing no symptoms and presenting no signs. (2) Those who have actual tuberculosis of the lung itself. These are comparatively rare, easy to diagnose and usually require prolonged hospital or sanatorium treatment. (3) Children with bronchial node tuberculosis causing both signs and symptoms.

The author confines himself to the last group, feeling that it is of great importance and somewhat neglected. While there are no definite pulmonary signs on which to base a diagnosis of bronchial lymph node tuberculosis, the author finds the following points useful both in diagnosing and in teaching.

(1) A positive skin test unless the child has recently recovered from measles or some other acute infection which might lead to a negative test. (2) A definable history of exposure from either human or bovine sources. (3) Constitutional signs and symptoms, especially loss of weight or failure to gain weight, along with "ease of tire" or undue fatigue, fever or rapid pulse. (4) The presence of enlarged bronchial nodes as shown by the x-ray or by clinical examination of the chest. (5) The absence of other evident sources of infection or toxemia such as (a) infected tonsils, (b) carious teeth, (c) intestinal disturbances, especially chronic appendix, and (d) other possible sources of infection, such as middle ear, lymph nodes in the neck, bronchopneumonia, whooping cough, measles, etc.

**A POSSIBLE MODE OF TRANSMISSION OF INFECTION IN TUBERCULOSIS.**—S. J. Shipman and A. G. Flood. The American Review of Tuberculosis. Sept. 1922.

The authors made a series of experiments in an attempt to discover if it were possible for children of tuberculous parents to become infected, not by direct contact with the diseased parent, but by close contact with the healthy one. They proved that tuberculosis may be transmitted by a healthy person by kissing and that the period of infectivity of the non-infected person is at least fifteen minutes.

It is hoped that the results of these experiments will serve as a warning against the kissing of young children.

**PERMANENT PULMONARY EFFECTS OF GAS IN WARFARE.**—John L. Hankins and Walter C. Klotz. The American Review of Tuberculosis, Sept. 1922.

This study was made on 166 cases at the Johnson City National Sanatorium who gave a definite history of having been gassed during military service. These cases all showed a definite picture of chronic bronchitis, varying in severity, with or without accompanying emphysema. This produces a certain degree of functional disability and places its victims in a position of higher age rating. Just how much of a vocational handicap results from these effects is undecided but is a matter for serious consideration. While a ma-

jority of these cases were diagnosed as clinical tuberculosis no attempt was made to show any connection between the effects of the gas and the co-existing tuberculosis.

**GENERAL MEDICINE**

Edited by Wann Langston, M. D.

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**THE SIGNIFICANCE OF STREPTOCOCCUS HEMOLYTICUS IN SCARLET FEVER.**—A. R. Dochez, M.D. and Lillian Sherman—J. A. M. A. 82-7, Feb. 16, 1921.

Attention is called to the more or less constant presence of streptococcus hemolyticus in scarlet fever, as well as in many septic conditions. This has given rise to the view that this organism may be the etiologic agent of this disease.

The authors state that recent methods in differentiation of different strains of streptococci enable one to distinguish readily between the organisms found in this condition and other streptococcal infections. They have been able to produce in animals, especially guinea pigs, a condition closely resembling scarlet fever in man—fever, leucocytosis, loss of weight, erythematous flush and desquamation. By immunizing animals they obtained a serum that would cause fading of the rash comparable to convalescent serum, and would not affect rashes due to other causes. Usually the temperature falls, general symptoms abate and angina improves. They believe a specific streptococcus is the cause of scarlet fever and that national immunity and experimental immunity are anti-toxic in character.

**BOOK REVIEWS**

**GERIATRICS**—A Treatise on the Prevention and Treatment of Diseases of Old Age and the Care of the Aged by Malford W. Thewlis, M.D., Editor, Medical Review of Reviews; Associate Editor, the Therapeutic and Dietetic Age. With introduction by A. Jacobi, M.D., LL.D. and I. L. Nascher, M.D. Second Edition Revised and Enlarged, Cloth, Illustrated 401 pages. Price \$4.50, 1924. C. V. Mosby Company, St. Louis.

This work, stripped of all possible redundancies is a plea for more careful living, abstemiousness, moderation in all those things popularly believed to shorten life. It especially notes the importance of certain obscure or overlooked and latent infections in their tendencies to shorten life or make for premature invalidism.

**MANAGEMENT OF THE SICK INFANT.** By Langley Porter, B.S., M.D., Professor of Clinical Pediatrics, University of California Medical School; Visiting Physician, San Francisco Children's Hospital; Consulting Pediatrician, Babies Hospital, Oakland; Consulting Pediatrician, Mary's Help Hospital, San Francisco, and William E. Carter, M.D., Assistant in Pediatrics and Chief of Out Patient Department, University of California Medical School; Attending Physician, San Francisco Hospital, San Francisco. Second Revised Edition, Cloth, 659 pages, price \$8.50, 1924. C. V. Mosby Company, St. Louis.

**PRACTICAL CHEMICAL ANALYSIS OF BLOOD.** A Book Designed as a Brief Survey of This Subject for Physicians and Laboratory Workers. By Victor Carl Myers, M.A., Ph.D., Professor and Director of the Department of Biochemistry, New York Postgraduate School and Hospital. Second Revised Edition, Cloth, Illustrated 232 pages. Price \$4.50, 1924. C. V. Mosby Company, St. Louis.

### NEW AND NONOFFICIAL REMEDIES

**Potassium bismuth tartrate-D. R. L.**—A basic potassium bismuth tartrate containing from 64 to 69 per cent of bismuth. For a discussion of the actions and uses see Bismuth Preparations in the Treatment of Syphilis (Journal A. M. A., August 25, 1923, p. 661). Potassium bismuth tartrate-D. R. L. is supplied only in the following forms: Ampules potassium bismuth tartrate with butyn-D. R. L., 0.1 Gm. (containing potassium bismuth tartrate-D. R. L., 0.1 Gm. suspended in 2 Cc. of a 0.6 per cent solution of butyn in a fixed oil); Ampules potassium bismuth tartrate with butyn-D. R. L., 0.2 Gm. (containing potassium bismuth tartrate-D. R. L., 0.2 Gm. suspended in 2 Cc. of a 0.6 per cent solution of butyn in a fixed oil). The product is administered intramuscularly. The Abbott Laboratories, Chicago.

**Scarlet red sulphonate.**—The sodium salt of azo-benzene-disulphonic-acid-azobetanaphthol. The actions and uses of scarlet red sulphonate are essentially the same as those of scarlet R medicinal Biebrich (see New and Nonofficial Remedies, 1923, p. 275). It is marketed only in the following forms: Scarlet red emulsion, 4 per cent. P. D. & Company, Scarlet red ointment, 5 per cent.—P. D. and Co., Scarlet red ointment, 10 per cent.—P. D. and Co., Parke, Davis and Co., Detroit. (Journal A. M. A., January 19, 1924, p. 209).

**Ergot aseptic.**—A liquid extract of ergot containing the soluble constituents of the drug. It is standardized biologically so that 1 Cc. represents 2 Gm. of ergot. The actions and uses of ergot aseptic are the same as those of ergot. The dose in 1 to 2 Cc. injected intramuscularly. Ergot aseptic is marketed only in 1 Cc. ampules. Parke, Davis and Co., Detroit.

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### INJECTION DIFFICULTIES

Almost every physician, some time or other, has on his hands a patient with veins so small or inaccessible that to give an intravenous injection is difficult or quite impossible. This happens occasionally in treating syphilis, for instance.

Till now, physicians in such a situation have found themselves seriously handicapped, especially since the arsenicals most effective in that disease have been suitable for intravenous use only. To inject these drugs intramuscularly would not do. It therefore became necessary to go back to mercury in accordance with old established routine and thus to make the best of it, as we say.

So it was till the new drug, sulpharsphenamine, came to light. This was produced in America for the first time at the Dermatological Research Laboratories, the Philadelphia branch of The Abbott Laboratories, Chicago. While effective as a spirocheticide, sulpharsphenamine appears also to have a wide margin of safety so far as the patient is concerned. Some of those who have investigated its practical value, assert that the drug is especially useful in neurosyphilis.

### THE VALUE OF EDIBLE GELATINE FOR GROWING CHILDREN

As every physician and dietitian knows, the food value of any protein depends upon the kind and amount of amino acids it contains in its structure. Therefore, in order that protein foods may be correctly classified according to their inherent food value, skilled scientists have taken purified proteins from various sources and have torn apart the protein molecule by chemical means and have subjected the resultant fragments (amino acids) to careful analysis.

Upward of twenty amino acids have been found to be joined together to make up the protein part of our more common foods. Certain of these amino acids are absolutely essential to growth. If the diet of a child does not contain these essential substances in proper amount, the child will not grow. One of these amino acids essential for growth is Lysine, in which many of our basic foods are deficient. For example, one of the supposedly indispensable dietary articles of man is white wheat bread. Yet if the protein of white wheat bread be analyzed, it will be found to contain little or no Lysine, the important growth promoter, although it does contain many other elements essential to nutrition.

If a child be fed a diet adequate in all respects except protein and the protein quota be made up from wheat bread protein (gliadin), that child will fail to grow normally. However, there is a readily available source of this important amino acid, namely, edible gelatine.

Chemists have shown that this protein contains 5.9 per cent of Lysine. Hence, it would seem to be a wise dietary procedure to supplement diets of growing children by the addition of gelatine, the efficiency of which is demonstrated in the following experiments.

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Oklahoma City, May 13, 14, 15

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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

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MUSKOGEE, OKLA., MAY, 1924

NUMBER 5

### FRACTURE OF THE SKULL—DIAGNOSIS AND TREATMENT\*

F. S. WATSON, M.D.  
OKMULGEE

In discussing traumatic injuries of the skull it is necessary to divide them into three groups: (1) Fracture without brain complication, (2) fracture with brain complications, and (3) brain injury without a fracture of the skull.

In all cases of head injuries from an external violence, the main objects for determination are: (a) What is the extent of injury? (b) What treatment should be carried out? (c) What has happened to the brain? Is there contusion, concussion or fracture of the skull. Any one or all of these may be present.

First fracture of the skull without brain complications is our mildest form. The diagnosis is very simple. On inspection we find a wound on the head that may seem very trivial, which should have a stereoscopic radiographic set made of the entire skull in order to determine the extent of the injury. In some of these cases we find spiculae of bone extending into the brain substance, later causing Jacksonian epilepsy, headaches and other conditions. To prevent this, all scalp wounds should be thoroughly inspected. If no fracture is found, the X-ray will come in for an accurate detail and can definitely determine the exact condition of the bony structures of the cranial vault. Occasionally such conditions can be determined by palpation, but without complete examination great errors at the cost of the patient may be caused.

These fractures may occur on the opposite side of the head from whence came the blow or impact, and are designated as "fracture by contrecoup." They are usually linear but may be stellate.

At the time of injury the margin separates, but due to the contour of the skull they quickly resume their original position, and

no symptoms of fracture after the original accident may occur.

Second—Fracture with brain complications. These are our most dangerous cases. Shock is present which will usually have to be combatted before proceeding further with the patient, as too much examination and manipulation could cost the life of the injured.

Injuries to the brain or its blood vessels may be immediate or remote. Immediate injuries are due to hemorrhage, lacerations and edema. Remote injuries is the scarring and cyst formation, which will not be discussed in this paper. Laceration may occur with or without a fracture, and is a complication serious in nature and hard to combat. No definite chain of symptoms occur in this type, and most of them are diagnosed at post mortems.

Edema and hemorrhage are the next immediate injuries and both present identical symptoms, and are apt to result in cerebral compression making their diagnosis and treatment identical. The edema and hemorrhage within the cranial cavity at first produces venostasis with marked cyanosis of the cortex, more and more pressure overcomes the arterial pressure producing cerebral anemia. Should the anemia be localized to one or the other hemispheres, the medulla and cerebellum may functionate normally, but should the anemia completely overcome both hemispheres extending to the base, the centers in the medulla receive no oxygen through the blood supply, and rapid shallow respirations occur, the blood pressure falls, the pulse is accelerated and the intracranial pressure overcomes the arterial pressure cutting off the respiratory centers producing instant death.

When the venostasis begins the patient complains of headache and dizziness. As the change in circulation of the brain advances, vertigo ensues, headache and delirium present themselves, the pulse rate begins to slow down and the blood pressure rises, coincident with this the pulse falls to 30 or 40 beats per minute, choked disc appears, then the pulse rate rises and blood pressure falls, pupils dilate, muscles relax and death results from respiratory paralysis.

Other symptoms may present themselves

\*Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

such as projectile vomiting, inequality of pupils and their failure to respond to light.

Third—Brain injuries without fracture have been covered in the preceding paragraph.

Treatment of fracture without brain complications. Wound if any is present, should be thoroughly cleansed, painted with tr. iodine, loosely sutured with silk-worm gut, closing without drainage. Hence, converting a compound fracture into a simple one. The patient should be placed in bed for from 24 to 72 hours and watched for at least 30 days for some brain complications.

The treatment of skull fractures with brain complications and brain complications without fracture shall not be separated in this discussion since, to a great degree they are the same.

Most of these cases come into the hospitals in a moribund condition, and should be placed in a dark quiet room, handled as little as possible, warm blankets with hot water bottles applied and given a chance to overcome the shock. Hot black coffee should be used per rectum, and after the shock has in a measure been overcome, the exact diagnosis may be arrived at by the use of stereoscopic radiographic sets. Depressed fractures elevated and the soft parts sutured loosely with silk-worm gut without drainage, unless the intracranial pressure is too great, say—say, 15 to 30 mm., than a subtemporal decompression should be done, which will not only relieve the high intracranial pressure but will expose the middle meningeal artery and any subdued hemorrhage. This is the only practical way to relieve any intracranial hemorrhage.

From five to ten days after the injury the decompression operation should be done (if the patient's condition will permit), at which time elevation or removal of the decompressed portion should take place, any blood clots removed, and the dura mater sutured if necessary. The suturing should be done with very fine silk or catgut.

By lumbar puncture we can determine from the presence of blood in the spinal fluid whether the injury is intradural or extradural, which is of no value so far as determining the patient's condition.

The lumbar puncture used with manometer will determine the intra-cranial pressure, and is of great value. This method is exact but should be used with great care. No spinal fluid should be removed until the pressure reading has been made, then remove the fluid until the pressure is eight to ten mm. To great and too rapid removal of the spinal

fluid by lumbar puncture may cause sudden death by letting the medulla slip into the foramen magnum, producing pressure on the floor of the fourth ventricle.

With the present methods it is impossible to determine the accurate position of a subdural hemorrhage, and the treatment may fall into that of symptomatic and expectant.

In a depressed fracture, should your intracranial pressure be below ten mm., and the patient not in a state of shock, we may proceed to elevate or remove the fragments leaving a smooth edged opening which will no doubt be better than a silver plate.

Local anaesthesia should be used in all cases if possible, and is the anesthetic of choice since no shock follows its use. However, chloroform is preferable with children.

Urotropin, thirty grains per day should be given when the fracture extends into the mucous membrane.

#### *Conclusions.*

1. Thorough examination together with stereoscopic radiographic sets in all cases in which there is suspected fracture.
2. Linear fractures with symptoms of compression should be treated with repeated lumbar puncture.
3. Shocks should by all means be combatted before operation.
4. The period of observation after apparent recovery, should be at least thirty days.
5. All cases of depressed fracture without shock should be operated immediately.
6. The monometer to determine the intracranial pressure should always be used.

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*Discussion:* J. HUTCHINGS WHITE, M.D., MUSKOGEE.

The Doctor's paper is very interesting and he has covered the ground well in the time allotted him.

In the treatment of fractures or injuries to the brain and skull one must not overlook the fact that two-thirds of these cases recover under expectant plan of treatment and for the other one-third rather definite symptoms indicate line of procedure. The presence of fracture in brain injuries is not an important factor in the treatment. The diagnosis of fractures with the aid of X-Ray is not difficult. The treatment is expectant, with quiet, ice bags, catharsis and liquid diet, or operative simple elevation of depressed fragments, or elevation and decompression. Spinal puncture is of much value in determining the intraspinal pressure and presence of blood

in spinal fluid. Spinal pressure of twelve to fourteen mm. or even sixteen mm. is sometimes markedly relieved by withdrawing ten cc. of spinal fluid; the patient's condition is also relieved. Where there is improvement repeated punctures often result in restoration to health. If spinal puncture does not produce improvement in patient's condition, one is not justifiable in continuing this form of treatment, but should resort to subtemporal decompression. Increase in intraspinal pressure sixteen mm. or above choked disc, unconsciousness, increased respiration, pulse slow, sixty; blood pressure 140; decompression should be done. Do not, however, wait for signs of oedema, i. e. pulse 140, blood pressure falling, Cheyne-Stokes respiration, repeated convulsions, intraspinal pressure above twenty mm. and choked disc before deciding to operate. If you do so you will surely lose your patient. It is of utmost importance that symptoms of acute shock be absent before operating.

J. W. BOLLINGER, M.D., HENRYETTA.

Mr. Chairman, Gentlemen, with the Doctor's paper I quite agree with him in all he says except in one instance, and that is with reference to drainage in a compound fracture of the skull.

He says he closes a compound fracture completely thus converting a compound into a simple fracture, with this I do not agree. I believe it is rare when we are justified in thus converting a compound fracture into a simple one.

The danger of infection is so much greater and the chief danger in a compound fracture is infection. We minimize this danger by allowing the parts free drainage.

I thank you.

### PSEUDO-ILEUS OR PSEUDO-INTESTINAL OBSTRUCTION\*

DR. H. LEE FARRIS  
TULSA

Harvey Cushing says "No one can be a good physician who has no idea of surgical operations, and a surgeon is nothing if he is ignorant of medicine." I shall, therefore, attempt to direct your attention briefly to pseudo-ileus or pseudo-intestinal obstruction from a medical and ultimately a surgical viewpoint. It is our opinion that this variety

of cases is generally overlooked, given small consideration, or entirely ignored by many of us who are usually very thorough, careful and painstaking in the study of most other abdominal conditions; while to our mind this is one of the most important of all. These analogous types of obstruction are indeed deceptive and it is but proper that we should familiarize ourselves with them. How often have we watched a laparotomy when, after careful search, the abdomen was again closed with the announcement "nothing found;" while considerable doubt remained in your mind (as well as that of the surgeon) lest some mechanical obstruction might have been overlooked; while also it was a fact that the mere opening of the abdomen and handling of the intestines was sufficient to stimulate peristaltic action with subsequent bowel movement in due time thereafter. Numerous reports of such cases, during and after operation, are on record.

These pseudo (or obstructions without any apparent mechanical cause) are indeed very serious and many are followed by fecal vomiting growing gradually (often rapidly) worse, terminating in death which is usually due to atony of the intestinal wall with stasis of its contents, consequent toxemia and shock. In these cases it is often very difficult at first to differentiate from acute obstruction or beginning peritonitis; however, by careful study of the history, symptoms, mode of onset, general condition, etc., it will be seen this type is not the same as those of the acute form, or infected peritoneum.

Another noteworthy fact is, that without any evident cause, the spastic contracture of the intestine may occur, (particularly after laparotomy) which, if allowed to persist for any length of time, will simulate acute intestinal obstruction. These contractions may become a very thin narrowed band which usually disappears so soon as the spasm is relieved.

Still another type may be seen occasionally which should not be confused with the spastic or acute form—I refer to hysteria, especially if accompanied by persistent vomiting. A fairly careful observation will show the physical signs to be, *not in proportion* in severity with the prearranged symptoms of the patient.

We have seen a case, apparently in splendid condition, eating and sleeping well, no distension of the abdomen or other sign of obstruction; after a fuss with some member of the family, she would get hysterical, vomit continuously and copiously (unless lavage

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association Annual Meeting, Tulsa, May 15, 16, 17, 1923.

was done), distend with gas to a degree that made one apprehensive. Then following atropine hyperdermatically and numerous enemas all symptoms would disappear.

Phantom tumor, "air swallowing" and similar conditions may also be placed under this heading.

Paralytic ileus or paresis is the most grave of all these anomalies and comes suddenly after laparotomy which has usually progressed most favorably for several hours following operation. It is not easily distinguished from beginning peritonitis but may be suspected because of absence of peristalsis.

*Pathology.* If there be definite pathological changes in the bowel which will produce a spastic obstruction or any condition of the nerve supply whereby an hysterical patient may set up deceiving symptoms of acute or spastic obstruction they are not known or understood, (so far as we have been able to find). It is simply a functional disturbance of the intestinal muscle tone in either the form of spasmodic contracture or paralysis of the same.

*Symptoms.* They are anomalies and may simulate any of several forms of acute or chronic obstruction (except there is not the intense paroxysmal pain, or pinched uneasy facial expression of either the acute form or peritonitis). Neither is there the severe shock accompanying. Also the absence of history of injury, sudden painful onset, etc. Relaxation usually relieves the condition which is not true of peritonitis and acute or chronic obstruction.

*Treatment.* First and probably of greatest importance is relaxation by morphine and atropine. Second, lavage as frequently as every two or three hours if necessary. Third, enemata of the several kinds, but seldom, (if ever) should purgatives be given. If not relieved in a few hours, electric enema should be resorted to if possible (which consists of the negative pad of a galvanic battery being placed on the affected part of the abdomen, while the long positive electrode is placed into the rectum and the current applied while water is continuously flowed into the colon). This should not be kept up long enough to exhaust the patient even if favorable results are not obtained.

Eserin gr. 1-30 or physostigmine gr. 1-100 should be given every three or four hours, especially if there is no rumbling of gas, which indicates paresis (probably the most dangerous type of these conditions).

Atropine gr. 1-60 to gr. 1-30 has been given frequently with good effect.

Sodio-benzoate of caffeine in two or three grain doses also camphor and oil hyperdermatically every three or four hours are suitable stimulants that act quickly and well.

Pituitrin (surgical) is also highly recommended but should be given with caution.

Adrenalin is favorably mentioned because of its selective action on the splanchnic nerves.

Apomorphine gr. 1-20 to 1-10 is very efficacious in the hysterical form giving almost instant relief to the stomach and relaxation to the nervous system. It may be repeated as occasion demands.

In view of the fact that the abdomen is not glass that we may look in and see the exact situation, it is wise to have surgical council early so if needs be, operative procedures may be undertaken at once (providing medical efforts have availed nothing) and before the patient has reached the state of exhaustion. If the condition is grave a loop of intestine should be brought up and enterostomy should be done which frequently is necessary to save life. Some weeks later the artificial anus may be done away with after the usual method.

#### *Conclusion.*

*First*—Lavage for the distended stomach and nausea.

*Second*—Colonic flushing either with or without electricity is usually successful as initial phase in practically all forms of obstruction, especially the fecal and paralytic.

*Third*—Relaxation (by morphin and atropine, also apomorphine), particularly in the spastic and hysterical forms.

*Fourth*—Laparotomy, with such maneuvers as needed to expose and remove the obstacle.

*Fifth*—Enterostomy, when indicated, frequently give brilliant results.

*Discussion:* C. J. FISHMAN, M.D., OKLAHOMA CITY.

The term "pseudo-intestinal-obstruction" appears to be a very vague one as applied to a condition such as Dr. Farris describes.

In consideration of the symptomatology as given by him, the following grouping should be considered:

*First:* Those spastic contractions of the bowel which may last for more than a few minutes.

*Second:* Atony of bowel upon an organic basis with some additional nerve disturbance.

*Third:* Paralytic ileus, or paresis of the bowel which so often follows operative pro-

cedure and is seen after bowel injuries or even in the course of severe toxic conditions, such as pneumonia, etc.

Finally, the purely functional disturbances, such as hysteria, in which the physiology of the bowel is disturbed to a greater or less degree.

If you consider the different classifications from the point of view of innervation of the bowel, we must consider the two groups of vagotonic or sympathicotonic influence.

On the other hand, the spastic contractions are considered an irritation of the vagus nervous system. At no time there is lack of peristalsis due to increased tone.

On the other hand, in the atonic conditions and in paresis of the bowel, there is lack of tone and lack of peristalsis.

In the first group, atropin in sufficient quantities will relieve the spasm and allow parastalsis to proceed.

In the second group of atony of the bowel, or paresis the two important drugs, namely, pituitrin and adrenalin, act quite miraculously in relief of this condition. After operations these drugs are most useful.

In the third group, the hysterical ilens, drug treatment cannot ever help classify or relieve.

I am inclined to think that Dr. Farris' case might easily be classed in one of the above groups as outlined.

### ACUTE PANCREATITIS: ITS DIAGNOSIS AND TREATMENT\*

L. H. CARLETON, M.D.  
TULSA

Acute pancreatitis, while not an especially common lesion, occurs frequently enough to be worthy of consideration in the differential diagnosis of the acute abdominal conditions.

It occurs in both sexes and at all ages. Osler, however, believes that it occurs more frequently in men, while Moynihan believes women are more predisposed.

The predisposing factors are obesity, alcoholism, pregnancy, gall-stones, obstruction at the ampulla of Vater by a stone or carcinoma or other tumor, infection of neighboring viscus with anastomosing nodes, as infection of the gall-bladder, colitis, gastric or duodenal ulcer or appendicitis, injury of the pancreas, intestines or biliary tract, pyemia, acute infectious disease, trauma, arteriosclerosis, pan-

creatic calculi, and focal infection. According to Egdahl it is possible for bacteria to cause acute pancreatitis by activating the enzymes of the pancreas, in which case the bacteria are probably secondary invaders.

The most striking symptom is acute agonizing pain in the epigastrium, which is so extreme that it may rapidly bring on collapse and may actually cause syncope. It is more or less constant, but may be paroxysmal. It tends to remain in the epigastrium, but may radiate to the left. Vomiting soon occurs and is so persistent that, together with the obstinate constipation, it has frequently led to the mistaken diagnosis of intestinal obstruction. Constipation is almost absolute, though enemata may bring away a little gas. Distension of the abdomen is a prominent feature and first appears in the upper abdomen, but later becomes general. There is tenderness in the upper abdomen, but the tenderness and rigidity are usually not extreme. The character of the pulse may be of value in the diagnosis of this condition as it rapidly becomes weak and small. The temperature is not of a great deal of significance; it may be normal, sub-normal or elevated to 103 or 104 degrees. In the very acute cases it is apt to be normal or subnormal, whereas in the subacute cases it is likely to be high. Glycosuria as a symptom usually occurs late and with advanced destruction.

Murphy said there was no lesion so severe in onset, none that caused such intense, continuous pain or collapsed the patient so much as acute hemorrhagic pancreatitis.

In arriving at a diagnosis, differentiation must be made from intestinal obstruction and peritonitis resulting from perforated gastric or duodenal ulcer, ruptured gall-bladder or appendix.

Deaver says that there is no one sign or symptom that can be said to be pathognomic of the disorder, but the onset is so sudden and acute that immediate operation is usually insisted upon without the formality of a definite pre-operative diagnosis.

Though Bloodgood has only encountered eleven cases in twenty-five years' experience, he believes that the condition can and should be diagnosed clinically.

In his first article on the subject, Reginald Fitz says: "Acute pancreatitis is to be suspected when a previously healthy person or a sufferer from occasional attacks of indigestion is suddenly seized with violent pain in the epigastrium, followed by vomiting and collapse, and in the course of twenty-four hours by a circumscribed epigastric swelling,

\*Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

tympanitic or resistant, with slight rise of temperature."

At operation the presence of a sero-sanguineous fluid in the peritoneum and the disseminated fat necrosis clinches the diagnosis.

**TREATMENT**—Acute pancreatitis is distinctly a surgical lesion and for this reason the importance of making a diagnosis in the less severely acute cases becomes apparent. There is some difference of opinion among operators as to the proper time to operate. Murphy advocated immediate operation with drainage. Deaver believes in immediate operation unless the patient is in a condition of profound shock, in which event he deems it wise to wait for a short time in order to give the patient a chance to rally and to permit the peritoneal inflammation to become localized. In the interim he uses the Murphy-Fowler-Ochsner treatment. He feels, however, that the decision as to when to operate is a matter of judgment acquired only by long experience. Moynihan believes that the safest course lies in early operation. W. J. Mayo advocates immediate operation where the patient is seen during the first forty-eight hours. After forty-eight hours the problem becomes more complex and depends largely upon the amount and virulence of the ensuing infection. Though the mortality in the acute cases is exceedingly high, he believes that immediate operation is not prohibitive and offers the best prospect of cure. Mikulicz in 1903, advanced the view that acute pancreatitis should be treated as any other phlegmon, that the moment the condition is recognized the abdomen should be opened and the inflamed pancreatic tissues and the pancreas itself incised and drained. He emphasizes the importance of operating in the early stage before secondary infection from the intestine renders the prognosis more unfavorable. The ideal procedure, he believes, would be rapid exposure of the pancreas through the gastrocolic omentum, incision of the swollen and inflamed gland and the introduction of a large gauze drain, examination of the gall-bladder and bile ducts, removal of calculi if present, and cholecystotomy.

Archibald<sup>1</sup> is of the opinion that in the hyperacute or fulminating cases in which death is obviously likely to occur within the first twelve to twenty-four hours, the patient being in collapse, it is better to wait, because the shock of the operation may turn the tide against the patient and it is impossible, short of cutting out all or most of the pancreas, to prevent that absorption of split products from the necrosed tissues of that organ, which

is the immediate cause of death. In all cases of less severity he advocates immediate operation.

There are two methods of approach to the pancreas, the transperitoneal and the extra-peritoneal through a loin incision. The latter route permits approach to the pancreas, especially its tail, without entering the peritoneal cavity. However, it does not give the free exposure of the parts that is necessary if radical surgery is indicated. The transperitoneal route is the one of choice in a beginning pancreatitis when the localizing symptoms are all epigastric, when there is a palpable tumor, or when the diagnosis is in doubt. This gives a free exposure of the operative field, the opportunity for radical surgery should this be desirable, and a better means of establishing adequate drainage. The pancreas should be incised and both tube and gauze drainage inserted. Any free fluid in the peritoneal cavity should be removed by gentle wiping. Drainage of the pelvic cavity also is indicated. Gall-stones if present should be removed, and the gall-bladder drained.

At operation the pancreas is found to be greatly swollen and softened. It presents a dark reddish, mottled appearance, and on microscopic examination we find areas of necrosis which stain poorly with the aniline dyes. About these necrotic areas there is a zone of inflammation and scattered through the involved gland there are more or less extensive areas of hemorrhagic infiltration.

The fat necroses which accompany acute pancreatitis are of considerable interest. They are due to the presence of the fat-splitting ferment, steapsin, in the tissues. Flexner has been able to prove the presence of steapsin in these areas of fat necrosis.

The bloody fluid in the peritoneum in cases of acute pancreatitis is considered by many to be quite toxic. Guleke, who attributes its toxicity to the presence of trypsin, claims to have produced death in animals by its injection. On the other hand, Whipple has injected the fluid into the peritoneal cavity and veins of healthy dogs and dogs sick with acute pancreatitis without producing any bad results.

The prognosis of acute pancreatitis depends on the severity of the disease, its early recognition and the time at which operative interference is instituted.

One of the most annoying postoperative complications of acute pancreatitis is the formation of sinuses. The skin over which the drainage flows becomes intensely irritated

and should be protected by a bland ointment. A strict antidiabetic diet should be given. Linder<sup>1</sup> gives sodium bicarbonate internally for the purpose of reducing toxicity of the pancreatic secretion.

1. Linder: Jour. Amer. Med. Assoc., lxix, p. 720.

### SUPPURATIVE APPENDICITIS\*

E. B. DUNLAP, M.D.  
LAWTON

This subject was chosen because of its frequency; because it is purely surgical; because the writer has had a great deal of personal experience with it and has enjoyed a fair degree of success in coping with it.

We would define the condition as one resulting from the escape of the infectious contents of the vermiform appendix into the abdominal cavity. Whether it be a rupture of the appendix as a result of infection distending its walls; from gangrene as result of destroyed blood supply; or from traumatism or from foreign bodies such as fecoliths or from all of these factors working conjointly, so far as the condition is concerned it matters little what the underlying pathological condition may be.

However, the most prevalent cause is, we believe, uninterpreted, neglected and mismanaged acute involvements of the appendix. We all know if appendicitis could be diagnosed in the early stage and proper surgical treatment instituted there would be no such condition as suppurative appendicitis. And again the time is almost here when the layman can make a diagnosis of acute appendicitis, or at least his knowledge and suspicion is sufficient to cause him to call a physician, and what physician is there who, if he could not make a positive diagnosis would not be concerned enough to call the assistance of a surgeon, and there surely is no surgeon who would not open an abdomen if the symptoms justified such. Then why do we so constantly have this condition, fraught with its hazards to life and surgical reputation, to deal with?

The answer comes—The patient has acute pain in the belly, is nauseated or vomits—has had it several times before, or maybe this is the first time—mother, grandmother, aunty or some obliging neighbor gives the usual dose of castor oil, salts or black draught, the patient's stomach does or does not retain it—more fortunate if it does not—the pain ceases, everything seems well, till pain comes again,

when the doctor is called, who from history and symptoms suspects the trouble, but symptoms are indefinite, he waits for further developments and calls the surgeon, who finds a grave condition and he is expected to deliver the goods. The surgeon, if he is of the set five to ten day type, says we will wait for localization, at the end of which we will drain—and nobody knows what's going on inside the belly. He waits and instead of localizing the infection spreads and general peritonitis ensues and as *last resort* an attempt to do something is made, and the patient's life is the last and the undertaker's the resort.

Another instance the patient has acute abdominal symptoms, the family physician is summoned promptly. He makes a positive diagnosis of acute appendicitis and advises immediate operation. Either the patient, some influential member, or the family as a whole agree with the doctor as to diagnosis, but differ as to treatment. They say we will wait until it's the last resort or try chiropractor. At the end of two or three days the family has a change of mind and they all agree that something must be done right now. They come to the Hospital "rearin' to go"—then the surgeon is taxed to the utmost. He has the patient's welfare to safeguard and the whims of an upset family to parry.

We do not mean to say that it is not advisable to suspend operative procedure in certain cases when the symptoms show evidence of general septic invasion with lack of resistance on part of the patient. These cases sometimes react under supportive treatment and are saved, but we do decry waiting procedure in the majority of suppurative cases of appendicitis, where the resistance of the patient is evidenced by temperature and pulse balance.

Doubtless all of us can look back and recall, in the light of our present knowledge, certain cases, where if we had waited the patient might be alive and other cases we might have saved had we not waited, and still others that might be here had we managed them differently after the operation, which was done relatively timely.

What then is to be our guide in dealing with this class of cases? We would say, surgical judgment. How is this obtained? We would say, by proper consideration of case, history, immediate past symptoms and existing condition. For in this stage we cannot rely upon any individual or set of symptoms, but are dealing with a deceptive condition.

If the condition of the patient is bad to the point of extremes, we know what has oc-

\*Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 15, 16, 17, 1923.

curred and what will occur if we meddle, so we wait. If the condition is relatively good we know in reason that it is proper to go ahead and operate and feel that all will be well. But how often do we meet the case that from history and symptoms is apparently recovering from an acute appendicitis and on account of a rigidity of the muscles and vague abdominal discomfort makes us wonder if trouble is not brewing within and we find upon entering we have a ruptured appendix with free unorganized fluid and have just anticipated the storm.

The thought we wish to convey is that the symptoms are so lacking or deceptive in suppurative appendicitis that they cannot be relied upon and the general condition of the patient must be the guide for action.

Then granting the patient's condition is such that we feel that the necessary operative procedure can be done with fair promise of success, we operate—how?

The usual McBurney's incision is made and the muscles split as in a clean operation, the appendix sought, found and ligated, usually with the meso-appendix to save time, using No. 1 or No. 2 plain catgut. The excess serous or sero-purulent exudative fluid removed with wet squeezed sponges. A drainage tube of this type is placed into the pelvis, which remains in situ until symptoms—not number of days—justify removing it. Peritoneum, muscles and fascia are closed in layers on either side of tube. Skin and subcutaneous tissues closed with silk-worm gut. We believe the extra time required in closing by layers is justified by minimizing the chances of hernia resulting from prolonged drainage.

We have adopted the use of No. 1 or No. 2 plain catgut for ligating appendix because we believe its use helped solve a complication for us three years ago, in this way: A girl 16 years of age was operated for suppurative appendicitis, using the above technique; she got along fine, but within twenty-four hours after removing the large drainage tube she developed symptoms of obstruction of bowel in region of cæcum. The symptoms became so grave that re-entering abdomen was considered, but upon repeating a surgical dose of pituitrin a fecal fistula was established relieving the symptoms and obstruction and the patient made an uneventful recovery.

#### After Treatment:

It has been our observation that rarely are these patients nauseated after operation, are usually very thirsty and sometimes hungry, and, as a rule, restless—a pitfall for the inexperienced surgeon—for as sure as the pa-

tient is given anything by mouth just so surely is disaster courted. Not a thing is given by mouth 'till all traces of peritoneal irritation are over.

Instead we give two hours on and two hours off normal saline or soda solution by the drip method, and, if necessary, nourishment per rectum. We give H. M. C. 1-2 strength as needed to keep patient at rest and sleeping.

They usually get well this way.

What is your way?

### THE OKLAHOMA FARM SANATORIUM

In 1917 the Journal announced the opening of the Oklahoma Cottage Sanatorium with a capacity of thirty beds. We now take pleasure in announcing the opening of the Farm Sanatorium with a capacity of twenty-



Main Building, Farm Sanatorium

five beds. Dr. Moorman now has two institutions with a combined capacity of fifty-five beds. Both institutions are modern in every respect.

The Farm Sanatorium is beautifully situated about one mile from Oklahoma City. It has the advantage of possessing all the quiet charm of the country and the conveniences



One of the large porches, Farm Sanatorium of the city. It has connected with it one hundred and sixty acres of land from which the two institutions are to be supplied with vegetables and dairy and poultry products.



SKYLINE OF THE CAPITAL CITY

### THE CONVENTION CITY.

BY ED. OVERHOLSER, PRESIDENT-MANAGER  
OKLAHOMA CITY CHAMBER OF COMMERCE

Members of the Oklahoma State Medical Association who have not been in Oklahoma City since the last convention held in the city two years ago, will find many notches in the skyline filled. Convention facilities have been greatly improved since that time and convenience of hotels to the convention hall will speed up the work and save much time getting from hotels to meetings.

This has been accomplished by the erection of a magnificent Masonic Temple which has one of the largest auditoriums in the Southwest. This auditorium is open to conventions of all kinds and although it has been in use hardly more than four months, many large gatherings have been accommodated.

The Temple is located at Sixth Street and Robinson Avenue. It was erected at a cost of \$1,250,000 and is one of the best buildings owned by Masonic orders.

The auditorium in which the sessions of the convention will be held is of special interest. The stage is exceptionally large and the most perfectly lighted in the country.

Several buildings have been erected in the business section since your last convention here. Several others are under construction.

One of these buildings which is of particular interest to men of the profession is the new Medical Arts Building which is to be constructed at First Street and Broadway. Excavation for the new structure is already under way.

The physicians and dentists of Oklahoma City have united in a corporation and are financing the buildings themselves. With the

exception of the first floor, the entire building will be used exclusively by them. The building is being erected of reinforced concrete and Bedford limestone at a cost of \$805,000, exclusive of the lots.

Rental space in the building will total 63,000 square feet of which 48,000 square feet has been rented. Each tenant will have his office "tailored" to suit his peculiar needs. Moreover, each tenant is a stockholder and also must be a member of the county society of this state.

The building will accommodate about 150 doctors and dentists and practically all of the leading men of these professions in the city will be located in it. The very latest in convenience and service has been planned in designing it as a professional office building. It will be ready for occupancy in February, 1925.

The first floor of the building is to be occupied by the Security National Bank.

Other buildings of interest which have



OKLAHOMA CITY'S NEW \$1,300,000 MASONIC TEMPLE IN WHICH THE STATE MEETING WILL BE HELD.

sprung up in the last two years include the ten story Tradesmens National Bank Building at Broadway and Main Street; the ten story Braniff Building, Third Street and Rob-



OKLAHOMA STATE UNIVERSITY HOSPITAL OPERATING IN CONNECTION WITH THE UNIVERSITY SCHOOL OF MEDICINE IN OKLAHOMA CITY.

inson Avenue; the \$500,000 Federal Reserve Bank Branch, Third Street and Harvey Avenue; the new \$500,000 Elks Home, now building across the corner from it; the eight story Oklahoma Club, in which the Chamber of Commerce is housed, at Robinson and Grand Avenues, and many others.

The above named are all to be seen on the way from the downtown hotels to the convention hall.

Those members of the Association who come to Oklahoma City for the first time, will find a hearty welcome and an honest effort to make them feel thoroughly at home. Oklahoma City is an easy place to find one's way about. From the packinghouses and the Capitol Hill addition on the south, to the State House in the northern part of the city, there is something of interest to be found.

Through the Conventions Bureau of the Chamber of Commerce which is associated with twenty other Chambers, forming the International Association of Conventions Bureaus, the Oklahoma City Chamber is prepared to handle conventions as no other cities in this section. Every need of the visitor will be looked after and in case of doubt, "Ask the Chamber."

Many hospitals, including the State University Hospital, are located in Oklahoma City and any one of them may be easily reached by street car in a few minutes.

Five railway lines, three interurban lines and two auto-bus lines radiating from the city, make connections with any part of the state easily accessible.

Oklahoma City is a city of beautiful homes and shady streets. Its entertainment features are many. There are two Country Clubs with

excellent golf courses, while municipally owned Lincoln Park boasts of one of the "sportiest" courses in the Southwest.

In the downtown section are many theatres of first grade, which provide plenty of indoor amusement.

The leading churches of the city are centrally located along Robinson Avenue, making it indeed an Avenue of Churches.

To tell all the advantages of Oklahoma City in a few words is impossible. To describe it to those who have seen it is equally futile, while to those who have not seen it, the best way is to come and let us show it to you. Everything to make the Medical Association convention a success is being done by the local members and the Chamber is doing its best to see that everyone enjoys every moment of their stay.



THE MILLION DOLLAR MEDICAL ARTS BUILDING AT FIRST AND BROADWAY, NOW UNDER COURSE OF CONSTRUCTION.

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 508 Commercial National Bank Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

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### EDITORIAL

#### HELP WANTED—WITH YOUR PAPERS

This is a repetition of our annual appeal for intelligent, good-faith cooperation from the contributors to the program of our annual meeting to prepare their papers in a uniform manner demanded by rules which should be well enough known by this time to make such appeal unnecessary. We should remember these essentials with reference to the matter. Those whose names appear on the program as presentors of papers, *should have papers*. Occasionally this small item is either overlooked or disregarded.

Papers should be prepared in duplicate at

least, preferably in triplicate. This costs little more and prevents the loss often occurring when the paper is mislaid by some one into whose hands it is placed for transmission to the JOURNAL. The author should retain one copy. Unless he is ashamed of his title, name and location his paper should contain these three items, in the order named. Strange as it may seem, we have papers headed with no title whatever, with the name and address of the contributor omitted as well. This makes the paper a subject for correspondence, sometimes loss, often delay in publication, if it ever gets that consideration. Comprehensive instructions appeared on this subject in an advertisement carried in the August 1923 issue of the JOURNAL, pp. xv, to which reference should be made.

Printers are autocratic in some of their demands, and we hold with them in that they are not exorbitant or unreasonable. One of the first of these is that their copy shall be *double spaced*, with wide margins on both sides; top and bottom. This matter helps every one reduce the number of inevitable errors which creep into publication despite every effort.

Please do not attach to your paper impossible or unnecessary pictures which allege orientation of the text. If the picture is obviously well known to the physician its reproduction is useless waste. If it is not a clear, white picture of high order, there is little or no use expecting satisfactory reduction to plates and reproduction in the JOURNAL. Yet we have experienced the demand that from nothing or nearly so, something creditable should appear. We simply cannot make it so, the photographers and copier-plate men say they cannot and we are at their mercy.

The man designated to discuss your article should have the courtesy of a copy or in lieu of copy a broad synopsis of the paper, sent him many days before the meeting.

#### ABSTRACT DEPARTMENTS

*will not be published this month, nor in the June JOURNAL, on account of these issues being taken up with matter concerning the annual meeting. Publication of the Abstract Departments will be resumed with the July number of the JOURNAL.*

### *Editorial Notes—Personal and General*

DR. R. L. EDMONDS, Arnett, has removed to Shattuck.

DR. C. E. HAYWARD, Wagoner, attended the clinics in Kansas City recently.

DR. and MRS. A. M. MARSHALL, Chandler, recently spent a week at Kansas City.

DR. W. D. PHILLIPS, Maud, who was operated on recently, has been removed to his home.

DR. O. G. BACON, Frederick, recently lost his father, W. S. Bacon of Johnson City, Tennessee.

DR. R. E. JONES, Stigler, is the newly appointed County Superintendent of Health for Haskell County.

DR. L. R. WILHITE, Perkins, was recently appointed to a Majority in the Medical Officers Reserve Corps.

DR. FRED S. CLINTON, Tulsa, celebrated his 50th birthday on April 15th, with a wedding anniversary party at his home.

DR. LUCILE BLACHLY, Drumright, has been named to be the director of the Bureau of Child Hygiene, succeeding Mrs. Arthur Benson.

CREEK COUNTY MEDICAL SOCIETY will entertain Payne County "Fisicans" and their wives at a banquet and funfest May 1st at Drumright.

DR. O. G. BACON, Frederick, was robbed of the front springs of his Ford recently, the thieves entering his garage to accomplish the job, also emptying the gasoline tank of its contents and taking two coats that were in the car.

DR. P. B. MYERS, Apache, after disposing of his practice in January, did post-graduate work at the Chicago Lying-In Hospital and the Sarrah Morris Children's Hospital during January and February, and is now located at El Reno.

THE NATIONAL HOSPITAL DAY COMMITTEE has designated Dr. Fred S. Clinton, Tulsa, as State Chairman, and authorized him to secure the cooperation of all the hospitals in the state in the observance of May 12 as National Hospital Day.

LEFLORE COUNTY MEDICAL SOCIETY met in regular meeting April 3, in conjunction with the Free Cancer Clinic, at the Woodson-Plumlee Hospital, Poteau. The Cancer Clinic is being conducted over the state under the auspices of the Oklahoma Public Health Association, and is presided over by Dr. E. S. Lain, Oklahoma City. The clinic was very interesting; sixteen cases were presented, nine of which were found to be in the beginning or first stages of cancer. The Society held its meeting following the clinic; papers were read by Drs. L. S. Willour, McAlester; C. S. Holt, and S. J. Wolfermann, both of Fort Smith. All physicians of the County were present, as well as several others, and it was one of the best meetings ever held in the County.

DR. ERNEST BALL, Tampico, Mexico, is visiting in Oklahoma.

DR. JOSEPH C. DUNN, Bartlesville, is reported to have removed to Missouri.

DR. J. W. ECHOLS, Prison Physician at McAlester, recently lost a brother through death.

DR. and MRS. D. D. McHENRY, Oklahoma City, are making a motor trip through Texas and New Mexico.

DR. H. C. RICKS, Durant, has been appointed State Bacteriologist, with headquarters in Oklahoma City.

DR. W. D. OLIVER, Erick, has returned from Memphis, where he took a special course of work under Dr. D. V. Ireland.

DR. J. HUTCHINGS WHITE, Muskogee, is visiting his mother at Danville, Va., where she recently celebrated her 86th birthday.

DR. BENJAMIN DAVIS, Cushing, is Payne County's delegate to the State Convention; Dr. L. A. Cleverdon, Stillwater, is alternate.

DR. and MRS. B. W. RALSTON, Miami, announce the birth on March 20th, of a son at the Miami Baptist Hospital. Mother and baby doing nicely.

DR. CARL PUCKETT, State Health Commissioner, is making a tour of inspection of five states, concerning health work, under the auspices of the Rockefeller Institute and will visit Washington and North Carolina.

DR. C. W. BALLAINE, Cleveland, won a suit instituted against him recently in the Supreme Court, it being held by the court that "A physician is not obligated to restore a patient to health and strength unless he so contracts."

DR. THOMAS J. SHINN, Wagoner, is taking post-graduate work at the Mayo Clinic, Rochester; Cleveland, O., and Washington and New York during April. Dr. Shinn was recently commissioned Captain in the Medical Officers Reserve Corps.

WAGONER COUNTY MEDICAL SOCIETY met April 12, with a good attendance. Dr. J. H. Plunkett, Wagoner, read a paper on "Obstetrics as it Relates to the General Practitioner" which was well received, all present taking part in the discussion.

NATIONAL BOARD OF MEDICAL EXAMINERS will hold sessions as follows: Part I, June 19, 20, 21; Part II, June 20 and 21, 1924. All applications for these examinations must be made on or before May 15, 1924. Further information may be obtained from the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

KANSAS CITY CLINICAL SOCIETY will present a list of notable members of the profession at its annual fall clinical conference to be held October 13 to 18, 1924 at Kansas City, among whom are Mr. Herbert Hoover, Public Health; Dr. Elliott Joslin, Boston; Dr. Frederick N. G. Starr, Toronto; Dr. Rudolph Matas, New Orleans; Dr. O. H. P. Pepper, Philadelphia; Dr. Geo. E. Vincent, Pres. Rockefeller Foundation; Surgeon General J. H. Cummings, U. S. P. H. S.; Major General Wm. H. Ireland U. S. A.; and Mr. Isaiah Hale, Sante Fe System, and a number of others.

TULSA THEATRES have refused to page doctors attending the shows because some of them have taken advantage of the privilege to secure free advertising for themselves. However, since some doctors would like to have this privilege restored, the theatres have agreed to resume paging doctors. This will be done under a *nom de plume*, as it were. Each doctor desiring to avail himself will secure from the secretary of the Medical Society a number which will be flashed on the screen whenever he is wanted. This rule will go into effect on April 14th, and thereafter no doctor will be paged unless the party calling the theatre gives his number.

ENID BOARD OF HEALTH, Dr. R. C. Barker, Superintendent, is staging a State Health Exposition at Enid on May 7, 8, 9 and 10, consisting of methods of sanitation and disease prevention, to be shown by exhibition, demonstration and motion pictures; food demonstrations; a better baby contest, and free entertainment at night, consisting of motion pictures, music and vaudeville. No charge is made for admission, the movement being sponsored by the commercial and civic organizations of Enid and the leading health men of the State and Nation. Every health department in the state is invited to attend. Expositions of this character have been held with wonderful success in the cities of the north and east, but it is an entirely new thing in the west.

#### DOCTOR GEORGE WALTER AMERSON

##### Requiescat In Pace

Dr. G. W. Amerson of Milo, Oklahoma died very suddenly on Tuesday April 15, 1924. He had been an active member of the medical profession, at this place for 19 years, and his untimely death while still in the midst of his greatest usefulness, came as a great shock to his many friends, and associates in the medical Profession.

He was ex-Chairman and a very active member of the Carter County Medical Association. He leaves a wife and children to mourn his loss as well as a host of his friends and patrons.

His place cannot be easily filled. He was a Physician of unusual skill and ability, thoroughly conscientious in his work, unsparring in his efforts to relieve suffering humanity. An honored citizen of our county, a kind and considerate husband and Father, his loss is irreparable.

Therefore:-Be it resolved by the Carter County Medical Society that we have in the death of our Brother Physician Dr. Geo. W. Amerson, sustained a loss which we keenly feel in our deliberations, and be it further resolved that the County of Carter has lost one who was untiring in his efforts for the betterment of the community in which he lived.

Be it further resolved that a copy of these resolutions be spread on the minute books of our Society, a copy be furnished the local papers, a copy be sent to the Oklahoma State Journal, and a copy given to the family of the deceased Brother.

##### Committee on Resolutions:

J. O. McNees.

W. Hardy.

S. W. Wilson.

#### DOCTOR GEORGE A. MORRISON

Dr. G. A. Morrison, Poteau, a pioneer physician of LeFlore County, died March 18, after an illness of nearly two years.

Born in Ohio 71 years ago, he received his preliminary education in the common schools of that state, after which he graduated from Drake University in 1885. Locating in Iowa he practiced for three years, going from there to Kansas where he remained fifteen years, after that locating in Poteau where he established a large general practice.

Dr. Morrison is survived by his widow to whom he was married 48 years ago, two daughters and two sons. Interment was made at Poteau, the funeral services being held at the M. E. Church.

#### DOCTOR JOHN JOSEPH CHAPMAN

Death very suddenly claimed Dr. J. J. Chapman, one of Lawton's most esteemed citizens April 12. The doctor expired in his office, 331 1-2 C avenue while at his desk. Dr. C. P. Hues was present at the time, but nothing could be done for the stricken man. Deceased leaves a wife and daughter to mourn his untimely demise.

Dr. Chapman was born in 1865, and graduated from the Baylor University College of Medicine, Dallas, in 1907.

Funeral services were conducted at the Centenary Methodist church Friday morning at 9 o'clock, April 4, Rev. A. S. Cameron, assisted by Rev. Lamb. Local physicians attended in a body and officiated as pallbearers.

#### BOOK REVIEWS

HERNIA; its anatomy, etiology, symptoms, diagnosis, and operative treatment, by Leigh F. Watson, M.D., Associate in Surgery, Rush Medical College, Chicago, Ill. Two hundred and thirty-two original illustrations by W. C. Sheppard. Cloth, Price \$11.00. St. Louis. C. V. Mosby Company, 1924.

While there can be very little new in a book on this subject, the author has compiled all the practical knowledge pertaining to it in a well classified form and presents it in a very interesting manner. He goes very minutely into the anatomy involved in each of the different hernias, also the developmental and mechanical factors that enter into their production. In the treatment he gives briefly most of the operations used at the present time, and describes very fully the ones he considers best and which he uses in his own work in treating the different forms of hernia and their complications. He states that most of his operations are done with local anes-

thesia, and advocates a wider use of this method. Very interesting chapters are the one on the medical history of hernia, giving the treatments used in the different periods, and the one on medico-legal aspects of hernia, giving the liability of the employer and of the attending surgeon. The illustrations are excellent and present much valuable information.

P. P. Nesbitt, M.D.

APPLIED PATHOLOGY IN DISEASES OF THE NOSE, THROAT AND EAR by Joseph C. Beck, M.D., F.A.C.S., Associate Professor of Laryngology, Rhinology, and Otolaryngology, University of Illinois College of Medicine; Chief of Staff, Otolaryngology, North Chicago Hospital, Chicago. With 268 original illustrations, including 4 color plates, price \$7.50, St. Louis: C. V. Mosby Company, 1923.

As one would expect from the title, this book is of a practical nature. The various diseases are taken up systematically, the pathological lesions and the symptoms that they cause, are described briefly and clearly, and in many instances followed by a brief outline of treatment. The author has confined himself to material from his own experience and the suggestions for treatment represent his own practice. The book is well illustrated. It is both a readable and a helpful work.

C. M. Fullenwider, M.D.

#### VALUE OF EDIBLE GELATINE IN THE DIETARY

Reprinted by permission from a report by Thomas B. Downey, Ph.D., Industrial Fellow, Mellon Institute of Research, University of Pittsburg.

Edible gelatine performs valuable functions in the dietary for several reasons: first, it is an exceedingly efficient protective and emulsifying agent; second, it is a very easy protein to digest and has considerable food value; and third, in suitable food combinations, it increases nutritive value.

The protective action and emulsification effects secured by the use of gelatine in the dietary are best shown by a consideration of the digestion of cow's milk. When cow's milk, which contains a relatively small amount of the protective colloid lactalbumin, is taken into the stomach with its acid secretions, the casein is coagulated into rather large greasy curds. These curds are tough and tenacious and difficult to redissolve by the

digestive juices, which must occur before the organism can assimilate the food. In the presence of gelatine the curd formation is either prevented or greatly modified, and loose, easily dissolved flocks may be formed. When the food is passed into the intestinal tract, with its alkaline secretions, gelatine continues to function as an emulsifying agent, and, by maintaining the fats in the finely divided emulsoid state, materially aids their assimilation.

Thus it is seen that gelatine possesses the singular property of exerting its beneficial effects in the stomach (with its acid secretions) and in the intestines (with their alkaline secretions). The use of a protective agent for bottle babies fed on cow's milk is a necessity and many authorities assert that normal adults require this aid to easy digestion.

The writer has investigated the action of edible gelatine as a supplementary agent to many food-stuffs common in the American dietary and has found in many cases that it greatly increases the nutritive value of these foods. As this investigation is not complete, a detailed description cannot be given at this time.

#### "MY BUDDY"

Brother of mine, my heart is breaking  
How I wish you might see and know;  
How much we all have loved and missed you;  
And how we are grieved to see you go.

Brother of mine and my "buddy" too,  
How we miss you, you can never know:  
If you could have only spoken to me,  
My "buddy" of fifty years ago.

From a cooing babe to manhood proud,  
We were "pals" and "buddies" all the way;  
No matter how far apart the fates  
Had caused our feet to stray.

We were "pals" and "buddies" to the last,  
And now he is waiting on the way,  
Where we will soon be "pals" again,  
And until the Judgment Day.

Sleep ye peacefully, my brother,  
I would not disturb thy rest;  
Peace to thy ashes and thy soul,  
Thou art numbered with the blest.

But buddy of mine, I still must wait,  
With sorrow, grief and tears,  
Until the hour my summons comes,  
My "buddy" of fifty years.

I'll still be seeing you, buddy of mine,  
I can hear your voice it seems;  
When I lay me down at night to rest,  
I am seeing you in my dreams.

But "pal," the time will not be long,  
When all sorrow and strife is o'er;  
Then, as we have been good "pals" here,  
We will be "buddies" and "pals" evermore.

—J. W. ECHOLS.

Written upon the death of my brother, Senator Bob Echols

*Abstracts. Observations from Current Medical Literature*

### SARCOMA OF CHOROID

Connie M. Guion and Conrad Berens, Jr., New York (*Journal A. M. A.*, March 29, 1924), report a case of diabetes complicated by glaucoma which was caused by a melanosarcoma of the choroid. The outstanding feature of this case as one of diabetes was the heavy content of diacetic acid and acetone and the persistent trace of sugar in the urine unchanged by starvation or diets, but always increased by an exacerbation of the severe pain in the eye. After the enucleation of the eye and the cessation of the pain, almost immediate disappearance of the sugar, acetone and the diacetic acid was striking.

### THE DEMONSTRATION OF PROSTATIC ENLARGEMENT BY THE ROENTGEN RAY

Edgar G. Ballenger, Omar F. Elder and William F. Lake, Atlanta, Ga. (*Journal A. M. A.*, March 29, 1924), have found that air cystograms with the patient lying face downward clearly demonstrate the intravesical snouts, median lobe enlargements, and similar conditions in prostatic hypertrophy. They do not advise its use in every case, but rather in those in which additional information is necessary in deciding whether an operation is required and whether it shall be the suprapubic or perineal approach.

### THE MANAGEMENT OF ABORTION

Nine hundred and sixty-one consecutive cases of abortion have been subjected to a detailed study by Onslow A. Gordon, Jr., Brooklyn (*Journal A. M. A.*, March 29, 1924). He concludes that all cases of abortion, threatened, inevitable or incomplete, should be treated conservatively until it is demonstrated that conservative treatment has failed. Conservative treatment, properly executed, will fail in something less than four cases out of a hundred. The mortality and morbidity in abortion cases is in direct ratio with the degree of intra-uterine intervention. The more manipulation and intervention, the higher the mortality and morbidity. Curettage in abortion transposes many aseptic cases. Curettage, therefore, is not only seldom indicated, but is often actually harmful. Conservative treatment has, if possible, a more positive indication in septic cases than aseptic cases.

### BILATERAL SACRO-ILIAC OBLITERATION

During the study of a number of sacro-iliac cases it was found by S. C. Woldenberg, Chicago (*Journal A. M. A.*, March 29, 1924), that a certain percentage showed a complete ankylosis or synarthrosis of the sacro-iliac joints. The clinical symptoms as recorded are a dull, aching pain, inability to lie down without great discomfort, rigidity of the muscles of the back, spasms of the muscles of the back, and atrophy of the gluteal fold, with obliteration of the normal lumbar curve and marked limitation of forward bending. The roentgen-ray findings are distinct erosion or alteration of the articular surfaces, and decreased joint space (sometimes reaching the stage of total obliteration with resulting ankylosis). These clinical symptoms and roentgenologic findings give evidence of a low-grade inflammatory process for which no causation can be proved.

### INFECTIONS OF THE LIP

Three fatal cases of lip infection are reported by Maurice Kahn, Los Angeles (*Journal A. M. A.*, March 29, 1924). One patient picked open a pimple with a needle and squeezed it. He died thirty-six hours later. No necropsy was done. The second case gave the same history. Secretions from the wound showed *Staphylococcus aureus*. The patient died on the sixth day. The third patient with a similar history died on the tenth day. Kahn says that *Staphylococcus aureus* is almost invariably the infective agent in these cases. The fatal cases usually show cavernous sinus thrombosis or metastatic abscesses of the lung or in various parts of the body, with thrombophlebitis of the facial vein and its tributaries. It is pointed out that the reason for the fatalities lay in the abundant vascular drainage of the region of the lips, thus making more likely venous thrombosis. Having in mind also the absence of connective tissue spaces, it will be seen that in infection of the lip the infective agent is brought into immediate intimate contact with the venous plexus of the lip. The almost constant motion of the lips has a tendency to disseminate the infection early in the disease by what is a mild degree of squeezing or rubbing of the infection against the vein wall. Later on, when the swelling has become marked, the pain would of itself inhibit any great amount of motion. But before this stage has been reached, another factor has entered and one of supreme importance, i. e., the squeezing.

## CONDENSED PROGRAM

### Oklahoma State Medical Association

THIRTY-SECOND ANNUAL MEETING, MAY 13, 14, 15, 1924

Masonic Temple, Oklahoma City, Oklahoma.

#### TUESDAY, MAY 13TH.

- Registration: In the Commercial Exhibit Room on the first floor, Masonic Temple.
- 8 A. M. to 12 M. Clinics at various hospitals.
- 9 A. M. to 12 M. Registration of visiting ladies.
9. A. M. Meeting of the Council at the Skirvin Hotel.
- 11 A. M. Meeting of the House of Delegates at Masonic Temple.
- 1 P. M. Scientific Programs; all Sections, at Masonic Temple.
- 2 to 4 P. M. Auto ride for visiting ladies.
- 3 P. M. Meeting of Association of Oklahoma Clinical Laboratories, at Masonic Temple.
- 6 P. M. Phi Beta Pi Banquet.
- 8 P. M. General Session, Masonic Temple.

#### WEDNESDAY, MAY 14TH.

- 8 A. M. to 12 M. Clinics at various hospitals.
- 9 A. M. Meeting of the House of Delegates at the Masonic Temple.
- 9 A. M. to 12 M. Shopping tour for visiting ladies.
- 12:15 P. M. Joint Luncheon with Chamber of Commerce, Oklahoma Club Bldg., Grand and Robinson Sts.
- 1 P. M. Scientific Programs; all Sections, at Masonic Temple.
- 1 P. M. to 2 P. M. Private Luncheon parties for visiting ladies.
- 2:30 to 5 P. M. Theater Party for visiting ladies.
- 7:30 P. M. General Session, Masonic Temple, Surgical Section meeting room, Dr. Ralph V. Smith, Presiding. Medical Section room, Dr. E. S. Lain, Presiding.
- 9 P. M. Informal Reception and Dance.

#### THURSDAY, MAY 15TH.

- 8 A. M. to 12 M. Clinics at various hospitals.
- 1 P. M. Scientific Programs, various Sections, at Masonic Temple.

## Program of the

## OKLAHOMA STATE MEDICAL ASSOCIATION

Thirty-Second Annual Meeting, Oklahoma City,  
May 13-14-15, 1924.

Masonic Temple, 6th and Robinson Sts. Tele-  
phone Maple 6080.

## GENERAL INFORMATION AND SUGGESTIONS.

**REGISTRATION:** Every attendant should register immediately upon arriving at the meeting place. Registration will be made after verification of membership from the county society rolls as reported by county secretaries. No resident physician of Oklahoma may be registered unless his name has been reported as a member. It is urged that these matters be attended to before the meeting in order to reduce the routine work to the minimum. If you hold no 1924 membership certificate advise both county and state secretaries at once.

**PAPERS:** Every paper read before the meeting is the property of the Association and should be carefully prepared for future Journal publication before the meeting. A copy or synopsis should be mailed the person designated to open discussion thereon well in advance of the meeting. Under no circumstances should they be carried away from the meeting if possible loss, delay in publication and correspondence is to be avoided.

**THE COUNCIL:** Will meet at the Skirvin Hotel at 9:00 a. m., May 13, and afterwards on call of the President. All matters pertaining to the business of the Association must be presented to this body before action by the House of Delegates.

**THE HOUSE OF DELEGATES:** Will meet at 11:00 A. M., May 13. Delegates should present their credentials at this meeting. All other meetings will be on call of the President or by direction of the House.

**CLINICS:** Will be held daily at the various hospitals. (Full details may be noted elsewhere in this program.)

**GENERAL MEETINGS:** Will be held Tuesday and Wednesday evenings, beginning at 8:00 P. M. as noted elsewhere.

**SCIENTIFIC SECTIONS:** Will be called to order promptly on the hour indicated. Papers must be read in the order they appear. The Committee on Arrangements request that Section officers adhere to this rule, as reading of papers out of time disarranges the program and the plans of those wishing to hear the paper. It is also requested that no paper scheduled for any single day be advanced by reason of absentees on the program, but that each paper be read as it is announced in the program. Papers passed should be constantly called for and if not read the Section should adjourn to the next meeting.

## Program for Entertainment of Ladies.

Tues. Morning—9-12—Registration.  
Tues. Afternoon, 2-4—Auto Ride.  
Tues. Evening, 8-10:30—General Session.  
Wednesday Morning, 9-12—Shopping Tour.  
Wednesday Noon, 1-2—Private Luncheon Parties.  
Wednesday Afternoon, 2:30-5:00—Theatre Party.  
Wednesday Evening, 9-12—Informal Reception and Dance.

## PHI BETA PI BANQUET 6 P. M., MAY 13.

The Association of Oklahoma Clinical Laboratories will meet May 13, in the Masonic Temple at 6th & Robinson St. at 3 P. M. At this meeting the usual business session will be held and papers will be read.

All those interested in laboratory work are cordially invited to attend.

Fred English, Secretary.

The County Health Officers will have a meeting on one of the days of the State Meeting; time, place and date will be announced to each Health Officer later.

Dr. F. L. Walton, Secretary,  
County Health Officers Assn.

## LOCAL COMMITTEE ON ARRANGEMENT.

1. General Chairman of All Committees.....  
.....DR. W. H. MILES
2. Committee on Clinics—DR. WANN LANGSTON, Chairman; DR. FENTON SANGER, Okla. Genl. Hospital; DR. B. R. HUNTER, Rolater Hospital; DR. L. J. STARRY, St. Anthony Hospital; DR. R. L. MURDOCK, University Hospital; DR. D. D. PAULUS, Wesley Hospital.
3. Committee on Meeting Places—DR. E. P. ALLEN, Chairman.  
General Medicine—DRS. W. W. RUCKS, and KENNETH WILSON.  
Surgery and Gynecology—DR. BASIL A. HAYES.  
Genito-Urinary and X-Ray—DRS. A. M. YOUNG and JOHN E. HEATLEY.  
Obstetrics and Pediatrics—DR. CLARK H. HALL.  
Eye, Ear, Nose and Throat—DR. T. G. WALLS.
4. Committee on Registration and Hotels—  
DR. CARROL POUNDERS, Chairman; DR. J. J. CAVINESS; DR. F. A. DE MAND.
5. Committee on Finances—DR. W. W. WELLS;  
DR. J. R. MCLAUCHLIN; DR. S. E. KERNODLE.

6. Committee on Entertainment—DR. S. E. FRIERSON, Chairman.  
Ladies Committee—MRS. M. M. ROLAND, Chairman.
7. Committee on Publicity—DR. WM. H. BAILEY, Chairman.

PROGRAM FOR GENERAL SESSIONS,  
MASONIC TEMPLE,  
6th and Robinson.

Tuesday Evening, May 13th, 8 P. M.

General Session, Ladies and Public Invited.

Meeting Called to Order by Chairman, Committee on Arrangements—DR. W. H. MILES, Oklahoma City.

*Invocation*—REV. ERNEST C. MOBLEY, Oklahoma City.

*Address of Welcome* (10 minutes)—JUDGE J. S. ROSS, Oklahoma City.

*Response to Address of Welcome* (10 minutes)  
DR. C. A. JOHNSON, Wilson.

*President's Address* (20 minutes)—DR. RALPH V. SMITH, Tulsa.

*Introduction of Fraternal Delegates and Guests* (15 minutes)—PRES. SMITH.

*Address of President-Elect* (20 minutes)—DR. E. S. LAIN, Oklahoma City.

*Address, "Humoral Eruptions"* (Illustrated with lantern slides)—DR. M. F. ENGMAN, St. Louis, Mo.

Wednesday Noon, Chamber of Commerce, Oklahoma Club Bldg., Grand & Robinson

Joint luncheon with the Chamber of Commerce, 12:15 P. M. Tickets \$.60, "Pay as you enter." Short addresses by Mr. Ed Overholser, President-Manager of the Chamber of Commerce; Dr. Stuart Roberts, Atlanta, Ga.; and Dr. C. M. Rosser, Dallas, Texas.

Wednesday Evening, May 14th, 7:30 P. M.  
Masonic Temple.

Surgical Section, Meeting Room, DR. RALPH V. SMITH, Presiding.

1. *The State Board of Medical Examiners*—DR. J. M. BYRUM, Shawnee.
2. *The State Health Department*—DR. CARL PUCKETT, Oklahoma City.

3. *The Medical Reserve Corps*—DR. L. S. WILLOUR, McAlester.

Medical Section, Meeting Room, DR. E. S. LAIN, Presiding.

1. *The State University Medical School*—DR. LEROY LONG, Oklahoma City.
2. *Oklahoma State Hospital Association*—DR. FRED S. CLINTON, Tulsa.
3. *Address*—DR. C. M. ROSSER, Dallas, Texas.

*Informal Dance and Reception*, 9 P. M.

CLINIC COMMITTEE

STATE MEDICAL ASSOCIATION MEETING  
May 13, 14, 15, 1924.

DR. WANN LANGSTON, Chairman.

DR. R. L. MURDOCK, University Hospital.

DR. L. J. STARRY, St. Anthony Hospital.

DR. D. D. PAULUS, Wesley Hospital.

DR. F. M. SANGER, Oklahoma General Hospital.

DR. R. B. HUNTER, Rolater Hospital.

Schedule of Clinics at the University Hospital  
800 E. 13th St.

(Take Culbertson or Capitol Car)

Figures at right indicate number of visitors that can be accommodated.

TUESDAY, MAY 13TH.

8:30-10:00	<i>Eye Clinic</i> —DR. E. F. DAVIS	15
8:30-10:00	<i>Ear, Nose, Throat</i> —DR. W. E. DIXON	15
8:30-10:00	<i>Medical Clinic</i> —DR. J. T. MARTIN	25
8:30-10:00	<i>Demonstration of Schick Tests</i> —DR. CARROL POUNDERS	20
10:30-12:00	<i>General Surgery</i> —DR. J. F. KUHN	15
10:30-12:00	<i>Ear, Nose Throat</i> —DR. A. L. GUTHRIE	15
10:30-12:00	<i>Medical Clinic</i> —DR. C. J. FISHMAN	25
10:30-12:00	<i>Obstetrical Clinic</i> —DRS. W. W. WELLS AND A. C. HIRSHFIELD	25
	<i>Demonstration of Anaesthesia each day in connection with Surgical Clinics</i> —DR. FLOYD J. BOLEND.	

**WEDNESDAY, MAY 14TH.**

8:30-10:00	<i>General Surgery</i> —DR. R. M. HOWARD	15
8:30-10:00	<i>Urology</i> —DR. W. J. WALLACE	15
8:30-10:00	<i>Gastro-intestinal Clinic</i> —DR. A. W. WHITE	25
8:30-10:00	<i>X-Ray Demonstrations</i> —DR. J. E. HEATLEY	25
8:30-10:00	<i>Orthopedic Clinic</i> —DR. W. K. WEST	15
10:30-12:00	<i>Fractures of the Spine and Cerebrospastic Palsies</i> —DR. S. R. CUNNINGHAM	15
10:30-12:00	<i>Pyelonephritis, Pyelitis and Hydronephrosis</i> —DR. REX BOLEND	15
10:30-12:00	<i>Dermatological Clinic</i> —DRS. LAIN AND ROLAND	25
10:30-12:00	<i>Obstetrical Clinic</i> —DRS. J. A. HATCHETT AND W. A. FOWLER	25

**THURSDAY, MAY 15TH.**

8:30-10:00	<i>Surgical Clinic</i> —DR. C. E. CLYMER	15
8:30-10:00	<i>Gynecology Clinic</i> —DR. M. SMITH	15
8:30-10:00	<i>Medical Clinic</i> —DR. LEA RIELY	25
8:30-10:00	<i>Pediatrics and Neuropsychiatry</i> —DR. WM. TAYLOR AND DR. A. D. YOUNG	25
10:30-12:00	<i>Gynecology Clinic</i> —DR. J. S. HARTFORD	15
10:30-12:00	<i>Carcinoma of the Rectum</i> —DR. A. A. WILL	15
10:30-12:00	<i>Heart Murmurs</i> —DR. A. B. CHASE	25
10:30-12:00	<i>Medical Clinic</i> —DR. R. M. BALLYEAT	25

Laboratory Demonstrations each day—Third Floor of Administration Building.

**ST. ANTHONY'S HOSPITAL.**

601-31 W. 9th St. (Take the Shartel Car).  
Schedule of Clinics.

**WEDNESDAY, MAY 14TH.**

9:00-10:30	<i>General Surgery</i> —DR. HORACE REED.
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9:00-10:30	<i>Orthopedic Surgery</i> —DR. EARL D. McBRIDE.
9:00-10:30	<i>Obstetrics</i> —DR. ALLEN.
10:30-12:00	<i>General Surgery</i> —DRS. RILEY AND KERNODLE.
10:30-12:00	<i>Chest</i> —DR. L. J. MOORMAN.
10:30-12:00	<i>Pediatrics</i> —DR. A. L. SOLOMON.

**THURSDAY, MAY 15TH.**

9:00-10:30	<i>Plastic Surgery</i> —DR. CURT VON WEDEL.
9:00-10:30	<i>Eye, Ear, Nose and Throat</i> —DRS. FERGUSON AND WAILS.
9:00-10:30	<i>Anaesthesia</i> —DR. R. S. MACCABE.
10:30-12:00	<i>Surgical Clinic</i> —DR. LEROY LONG.
10:30-12:00	<i>Eye, Ear, Nose and Throat</i> —DR. L. M. WESTFALL.
10:30-12:00	<i>Heart</i> —DR. JOHN RODDY.
10:30-12:00	<i>Medical Diagnostic</i> —DR. GEORGE A. LA MOTTE.

**WESLEY HOSPITAL CLINICS.**

300 W. 12th St. (Take the Shartel Car).

**TUESDAY, MAY 13TH.**

9:30-10:00	<i>Medical Clinic—Hypertension and Nephritis</i> —DR. D. D. PAULUS.
10:00-11:00	<i>Gastrointestinal Diseases</i> —DR. J. M. POSTELLE.
10:30-12:00	<i>Surgical Clinic</i> —DR. A. L. BLESCH.
10:30-12:00	<i>Obstetrics</i> —DR. J. G. BINKLEY.
11:00-12:00	<i>Diseases of Chest</i> —DR. W. W. RUCKS.

**WEDNESDAY, MAY 14TH.**

8:30-10:00	<i>Surgical Clinic</i> —DR. A. L. BLESCH.
8:30-10:00	<i>Eye, Ear, Nose and Throat</i> —DR. J. C. MACDONALD.
9:00-10:00	<i>Laboratory-Diagnosis and Control of Treatment</i> —DR. WM. H. BAILEY.
10:00-11:00	<i>Insulin and Dietary Treatment</i> —DR. D. D. PAULUS.
10:30-12:00	<i>Genito-Urinary Surgery</i> —DR. JOHN Z. MIRAZ.
10:30-12:00	<i>Surgical Clinic</i> —DR. CHAS. E. BARKER.

Symposium on Diabetes.

11:00-12:00	<i>Symptoms and Complications</i> —DR. W. W. RUCKS.
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**THURSDAY, MAY 15TH.**

- 8:30-10:00 *Surgical Clinic*—DR. A. L. BLESCH.  
 8:30-10:00 *Eye, Ear, Nose and Throat*—  
 DR. J. J. CAVINESS  
 9:00-10:00 *Laboratory-Diagnostic Methods*  
 —DR. WM. H. BAILEY.  
 10:00-11:00 *Gastrointestinal Diseases*—DR.  
 D. D. PAULUS.  
 10:30-12:00 *Genito-Urinary Surgery*—DR.  
 JOHN Z. MIRAZ.  
 10:30-12:00 *Surgical Clinic*—DR. S. E. FRIER-  
 SON.  
 11:00-12:00 *Medical Clinic*—DR. W. W.  
 RUCKS.

**OKLAHOMA CITY GENERAL HOSPITAL  
CLINIC.**

501 W. 12th St. (Take the Shartel Car).

**TUESDAY, MAY 13TH.**

- 10:30-12:00 *Sub-Mucous Resection*—DR. L.  
 A. NEWTON.  
 10:30-12:00 *Extensive Burn*—DR. FENTON  
 SANGER.

**WEDNESDAY, MAY 14TH.**

- 8:30-10:00 *Ureteral Stricture*—DR. FENTON  
 SANGER.  
 8:30-10:00 *Neurosyphilis*—DR. KENNETH  
 WILSON.  
 10:30-12:00 *Goitre*—DR. J. E. HARBISON.  
 10:30-12:00 *Prolapsed Stomach*—DR. PAUL  
 HASKETT.

**THURSDAY, MAY 15TH.**

- 8:30-10:00 *Abdominal Section*—DR. C. W.  
 TOWNSEND.  
 8:30-10:00 *Urology*—DR. R. S. LOVE.  
 10:30-12:00 *Abdominal Section*—DR. ROSS  
 D. LONG.  
 10:30-12:00 *Cardiac Clinic*—DR. W. A.  
 LACKEY.

**ROLATER HOSPITAL.**325 E. 4th St. (Take E. 4th St. Car).  
Schedule of Clinics.**TUESDAY, MAY 13TH.**

- 8:00-10:00 *Surgical-Goitre*—DR. J. S.  
 MAXWELL.  
 10:00-12:00 *General Surgery*—DR. M. E.  
 STOUT.

**WEDNESDAY, MAY 14TH.**

- 8:00-10:00 *Surgical-Goitre*—DR. J. S. MAX-  
 WELL.  
 10:00-12:00 *Urology*—DR. R. S. LOVE.

**THURSDAY, MAY 15TH.**

- 8:00-10:00 *Surgical*—DR. M. E. STOUT.  
 10:00-12:00 *Medical*—DR. J. E. HOLLIDAY.

**SCHOOL OF MEDICINE.**

Outpatient Clinic.

2nd &amp; Stiles Sts. (Take E. 4th St. Car).

**TUESDAY, MAY 13TH, AND WEDNESDAY,  
MAY 14TH.**

- 12:30 *Demonstrations—Diagnostic Clinics.*  
*Gynecology*—DR. L. M. SACKETT.  
 (Methods of Examination; Acute and Chron-  
 ic Gonorrhea; Salpingitis; Misplacements;  
 Malignancy; Didelphus).

*Genito-Urinary*—DR. C. B. TAYLOR.*Obstetrics*—DR. DICK LOWERY.**GENERAL MEDICINE, NEUROLOGY, PATHOL-  
OGY AND BACTERIOLOGY.**DR. LEA A. RIELY, Chairman, Oklahoma City.  
DR. GAYFREE ELLISON, Secretary, Norman.**MAY 13, 1924**

Chairman's Address—

1. *Subacute Bacterial Endocarditis*—DR. LEA  
 A. RIELY, Oklahoma City.
2. *Some of the Intervening Difficulties in the  
 Treatment of Mental Cases*—DR. D. W.  
 GRIFFIN, Norman, Okla.  
 Discussion opened by DR. A. D. YOUNG,  
 Oklahoma City.
3. *Digitalis in Medicine and Surgery*—DR.  
 STUART ROBERTS, Atlanta, Ga.
4. *Artificial Pneumothorax*—DR. HORACE  
 PRICE, Tulsa, Okla.  
 Discussion opened by DR. L. J. MOORMAN,  
 Oklahoma City.
5. *Malaria in Children*—DR. M. L. LEWIS,  
 Ada, Okla.  
 Discussion opened by DR. W. M. TAYLOR,  
 Oklahoma City.

**MAY 14, 1924.**

6. *Acute and Chronic Pancreatitis*—DR. H.  
 T. BALLANTINE, Muskogee, Okla.  
 Discussion opened by DR. FRED S. CLINTON,  
 Tulsa.

7. *Parasitism of Fat*—DR. K. H. BEALL, Fort Worth, Texas.
8. *The Significance of Blood Flowing from the Anus, Colon, Etc.*—DR. J. W. NIEWEG, Duncan.  
Discussion opened by DR. A. A. WILL, Oklahoma City.
9. *Goiters and Probable Causes. Comments on Treatment*—DR. C. W. HEITZMAN, Muskogee.  
Discussion opened by DR. T. H. MCCARLEY, McAlester.
10. *Influence and Insanity*—DR. FELIX M. ADAMS, Vinita.  
Discussion opened by DR. J. J. GABLE, Norman.

## MAY 15, 1924.

11. *Causes of Tumors*—DR. L. A. TURLEY, Norman, Okla.  
Discussion opened by DR. R. E. MYERS, Oklahoma City.
12. *Treatment of Auricular Fibrillation*—DR. W. J. BRYAN, JR., Tulsa.  
Discussion opened by DR. C. J. FISHMAN, Oklahoma City.
13. *Treatment of Diabetes*—DR. A. B. LEEDS, Chickasha.  
Discussion opened by DR. W. H. BAILEY, Oklahoma City.
14. *Inflammatory Rheumatism*—DR. HENRY C. RICKS, Durant.  
Discussion opened by DR. W. W. RUCKS, Oklahoma City.
15. *Musings of a Young Physician*—DR. E. L. YEAKEL, Shawnee.

RADIOLOGY, GENITO-URINARY DISEASES  
AND DERMATOLOGY.

DR. J. Z. MRAZ, Chairman, Oklahoma City.  
DR. SHADE D. NEELY, Secretary, Muskogee.  
*Guests of Honor:* DRs. CLINTON K. SMITH, Kansas City; ROBERT H. MILWEE, Dallas, and R. H. KNAPPENBERGER, Kansas City.

## TUESDAY, MAY 13, 1:00 P. M.

*Symposium on Pelvic Cancer.*

(The Sections on Surgery, Gynecology and Obstetrics will participate in this meeting. It is also open to all attending physicians).

1. (a) *Early Signs and Symptoms of Cancer of the Uterus and Necessity for Early Treatment*—DR. J. S. HARTFORD, Oklahoma City.

(b) *Pelvic Cancer, Exclusive of Cancer of the Female Organs*—DR. LEROY LONG, Oklahoma City.

(c) *Surgical Treatment of Cancer of the Uterus*—DR. L. M. SACKETT, Oklahoma City.

(d) *Radium Therapy*—DR. R. H. KNAPPENBERGER, Kansas City.

(e) *Deep X-Ray Therapy*—DR. ROBERT H. MILWEE, Dallas.

Discussion opened by DR. J. HUTCHINGS WHITE, Muskogee.

2. 3:00 P. M. *Chairman's Address*—DR. J. Z. MRAZ, Oklahoma City.

3. 3:30 P. M. *Some X-Ray Aspects of Pulmonary Tuberculosis*—DR. HUGH M. SWEENEY, Past Asst. Surgeon, U. S. P. H. S. Veterans Hospital No. 90, Muskogee, Oklahoma.

Discussion opened by DR. J. E. HEATLEY, Oklahoma City.

4. 4:00 P. M. *A Useful Procedure in Sacro-Iliac Strain*—DR. JAS. C. JOHNSTON, McAlester.

Discussion opened by DR. C. H. BALL, Tulsa.

5. *Chronic Condition of the Posterior Urethra, With Special Reference to Methods of Diagnosis*—DR. ELLIS MOORE, Oklahoma City.

Discussion opened by DR. J. H. HAYS, Enid.

6. *Uro-Genital Tuberculosis*—DR. J. W. ROGERS, Tulsa.

Discussion opened by DR. W. J. WALLACE, Oklahoma City.

7. *The Role of Arsphenamine in Syphilis*—DR. C. B. TAYLOR, Oklahoma City.

Discussion opened by DR. C. R. DAY, Oklahoma City.

8. *Infection of the Upper Urinary Tract in Children*—DR. CLINTON K. SMITH, Kansas City, Missouri.

Discussion opened by DR. R. S. LOVE, Oklahoma City.

9. *Focal Infection as the Cause of Urinary Diseases in Women*—DR. FENTON B. SANGER, Oklahoma City.

Discussion opened by DR. F. J. BAUM, McAlester, Oklahoma.

10. *Intravenous Medication in Kidney Infections*—DR. REX BOLEND, Oklahoma City.

Discussion opened by DR. A. M. YOUNG, Oklahoma City.

11. *Gonorrheal Rashes*—DR. J. S. HOOPER, Tulsa.

Discussion opened by DR. E. L. COMENOUR, Tulsa.

## OBSTETRICS AND PEDIATRICS

DR. A. C. HIRSHFIELD, Chairman, Oklahoma City.

DR. DICK LOWRY, Secretary, Oklahoma City.

Guest of Honor, DR. GEORGE CLARK MOSHER, Kansas City, Missouri.

## MAY 13TH, 1 P. M.

*Symposium on Pelvic Cancer.* (In conjunction with sections on Surgery and Gynecology, Genito-Urinary, Skin Diseases and Radiology. See detailed program under G. U. Skin Diseases and Radiology. Symposium adjourns at 3 P. M.)

## MAY 13TH, 3 P. M.

1. Chairman's Address—  
*The Trend of Obstetrics*—DR. A. C. HIRSHFIELD, Oklahoma City.
2. *Cervical and Perineal Lacerations*—DR. W. A. FOWLER, Oklahoma City.  
Discussion opened by DR. DICK LOWRY, Oklahoma City.  
Discussion continued by DR. C. V. RICE, Muskogee.
3. *Our Responsibility for the Pre-School Age Child*—DR. JOHN PAINE TORRY, Bartlesville.  
Discussion opened by DR. LUCILE SPIRE BLACHLY, Director of Bureau of Hygiene, State Health Department, State of Oklahoma.  
Discussion continued by DR. CLARK H. HALL, Oklahoma City.
4. *Further Observation on Syphilis in the New Born*—DR. EARL L. YEAKEL, Shawnee.  
Discussion opened by DR. T. C. SANDERS, Shawnee.  
Discussion continued by DR. CARROL M. POUNDERS, Oklahoma City.

## MAY 14TH, 2 P. M.

5. *The Primiparac, Care and Delivery*—DR. CATHERINE BRYDIA, Ada.  
Discussion opened by DR. W. W. WELLS, Oklahoma City.  
Discussion continued by DR. R. M. ANDERSON, Shawnee.
6. *A Critical Study of Maternal Mortality*—DR. GEORGE CLARK MOSHER, Kansas City, Missouri. Member of Committee on Maternal Welfare of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons.  
Guest of Honor, Section of Obstetrics and Pediatrics.
7. *The Care of the Pregnant Woman by the General Practitioner*—DR. R. M. ANDERSON,

Shawnee.

Discussion opened by DR. J. H. HATCHETT, Oklahoma City.

Discussion continued by DR. G. R. OSBORNE, Tulsa.

8. *The Intra-Peritoneal Use of Anti-Diphtheritic Serum*—DR. C. E. BRADLEY, Tulsa.  
Discussion opened by DR. WM. M. TAYLOR, Oklahoma City.  
Discussion continued by DR. JULIAN FEILD, Enid.
9. *Vomiting of Infancy and Early Childhood*—DR. C. V. RICE, Muskogee.  
Discussion opened by DR. JULIAN FEILD, Enid.  
Discussion continued by DR. H. E. BREESE, Henryetta.
10. *Are we progressing in Obstetrics as in Other Branches? If not, Why?*—DR. JOSEPH G. SMITH, Bartlesville.  
Discussion opened by DR. W. A. FOWLER, Oklahoma City.  
Discussion continued by DR. JOHN P. TORRY, Bartlesville.

## MAY 15TH, 2 P. M.

11. *Ectopic Pregnancy*—DR. A. J. SANDS, Oklahoma City.  
Discussion opened by DR. J. S. HARTFORD, Oklahoma City.  
Discussion continued by DR. M. H. NEWMAN, Oklahoma City.
12. *Some Medical and Surgical Phases of Obstetrics*—DR. GEORGE R. OSBORNE, Tulsa.  
Discussion opened by DR. R. E. LOONEY, Oklahoma City.  
Discussion continued by DR. JOHN L. DAY, Norman.
13. *The Use of the Sterile Package in Rural Obstetrics*—DR. C. D. BLACHLY, Drumright.  
Discussion opened by DR. DICK LOWRY, Oklahoma City.  
Discussion continued by DR. E. E. RICE, Shawnee.
14. *The Treatment of Sinusitis in Children*—DR. JAS. C. BRASWELL, Tulsa.  
Discussion opened by DR. D. D. MCHENRY, Oklahoma City.  
Discussion continued by DR. H. S. BROWN, Ponca City.
15. Subject and Author to be announced later.
16. Subject and Author to be announced later.

## SURGERY AND GYNECOLOGY

DR. R. M. HOWARD, Chairman, Oklahoma City.

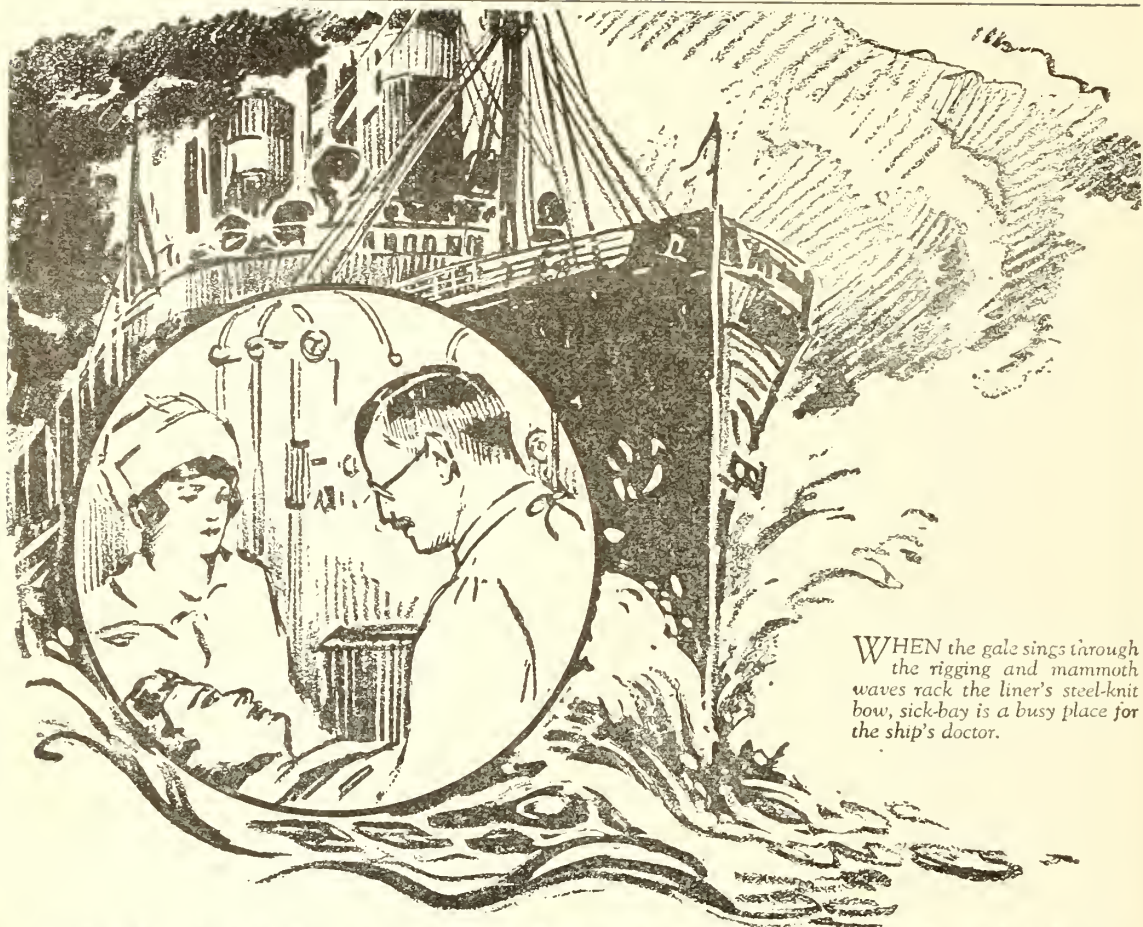
## TUESDAY, MAY 13, 1:00 P. M.

1. *Symposium on Pelvic Cancer.* (In conjunction with sections on Surgery and

## OFFICERS COUNTY SOCIETIES 1924

County	President	Secretary
Aldair	Dorsey . Chambers, Stilwell	Robt. M. Church, Stilwell
Atfalpa	James Stevenson, Cherokee	H. A. Lile, Cherokee
Aeoka	Thos. H. Briggs, Atoka	Chas. C. Gardner, Atoka
Beaver		
Beckham	E. S. Kilpatrick, Elk City	W. D. Oliver, Erick
Blaine		
Bryan	C. F. Taliaferro, Bennington	John A. Haynie, Durant
Caddo	Clarence N. Meador, Anadarko	Charles R. Hume, Anadarko
Canadian	W. J. Muzzy, El Reno	James T. Riley, El Reno
Carter	C. A. Johnson, Wilson	S. DePorte, Ardmore
Cherokee	W. G. Blake, Tahlequah	Jos. M. Thompson, Tahlequah
Choctaw	Thos. Henderson, Ft. Towson	H. H. White, Hugo
Cleveland	J. M. Williams, Norman	B. H. Cooley, Norman
Coal	J. J. Hipes, Coalgate	Frank Bates, Coalgate
Comanche	W. J. Mason, Lawton	Thos. R. Lutner, Lawton
Cotton		
Craig	F. M. Adams, Vinita	C. S. Neer, Vinita
Creek	L. H. Starr, Drumright	C. D. Blachly, Drumright
Custer	W. I. Basinger, Butler	C. H. McBurney, Clinton
Dewey		
Ellis		
Garfield	John R. Walker, Enid	D. D. Roberts, Enid
Garvin	C. M. Pratt, Lindsay	J. W. Stephens, Pauls Valley
Grady	A. W. Nunnery, Chickasha	D. S. Downey, Chickasha
Grant	I. V. Hardy, Medford	Chas. A. Brake, Medford
Greer	Ney Neel, Mangum	J. B. Hollis, Mangum
Harmon		
Haskell		
Hughes	L. M. Lett, Dustin	John Davis, Stigler
Jackson		D. Y. McCary, Holdenville
Jefferson	M. L. Hutchison, Ryan	J. W. Watson, Ryan
Johnson		
Kay		
Kingfisher		
Kiowa		
Latimer	R. L. Rich, Red Oak	J. C. Hawkins, Blackwell
LeFlore	Harrell Hardy, Poteau	A. Dixon, Hennessey
Lincoln	A. M. Marshall, Chandler	J. H. Moore, Hobart
Logan	H. W. Larkin, Guthrie	E. L. Evans, Wilburton
Love		Earl Woodson, Poteau
Major		C. M. Morgan, Chandler
Marshall	T. A. Blalock, Madill	William C. Miller, Guthrie
Mayes		
McClain	I. N. Kolb, Blanchard	Elsie L. Specht, Fairview
McCurtain	A. S. Graydon, Idabel	W. D. Haynie, Kingston
McIntosh	A. L. Mobley, Eufaula	Ivadel Rogers, Pryor
Murray	J. T. Wharton, Sulphur	O. O. Dawson, Wayne
Muskogee	Milton C. Thompson, Muskogee	R. H. Sherrill, Broken Bow
Noble		W. A. Tolleson, Eufaula
Nowata	J. P. Sudderth, Nowata	Howson C. Bailey, Sulphur
Okfuskee	C. M. Bloss, Okemah	A. L. Stocks, Muskogee
Oklahoma	William H. Bailey, Oklahoma City	
Okmulgee	J. L. Miner, Beggs	John R. Collins, Nowata
Osage	G. E. Stanbro, Pawhuska	R. Keyes, Okemah
Ottawa	G. A. DeTar, Miami	E. Lee Jones, Oklahoma City
Pawnee		W. W. Stark, Okmulgee
Payne	John A. Martin, Cushing	Leonard C. Williams, Pawhuska
Pittsburg	J. F. Park, McAlester	G. Pinnell, Miami
Pontotoc	S. P. Ross, Ada	E. T. Robinson, Cleveland
Pottawatomie	J. M. Byrum, Shawnee	J. Walter Hough, Cushing
Pushmataha	H. C. Johnson, Antlers	F. L. Watson, McAlester
Roger Mills		B. B. Dawson, Ada
Rogers	W. F. Hayes, Claremore	T. C. Sanders, Shawnee
Seminole		John A. Burnett, Crum Creek
Sequoyah	T. F. Wood, Sallisaw	Melvin T. Means, Claremore
Stephens	J. B. Carmichael, Duncan	
Texas	Wm. H. Langston, Guymon	E. P. Greene, Sallisaw
Tillman	C. Curtis Allen, Hollister	J. W. Nicweg, Duncan
Tulsa	A. Y. Emerson, Tulsa	R. B. Hayes, Guymon
Wagoner	T. J. Shinn, Wagoner	J. Angus Gillis, Frederick
Washington	Joseph G. Smith, Bartlesville	Chas. A. Haralson, Tulsa
Washita	E. F. Stevens, Foss	C. E. Hayward, Wagoner
Woodward	Arthur E. Hale, Alva	J. C. Dunn, Bartlesville
	C. J. Forney, Woodward	B. W. Baker, Cordell
		Oscar E. Tempin, Alva
		C. W. Tedrowe, Woodward

OTE—Corrections and additions to the above list will be cheerfully accepted



WHEN the gale sings through the rigging and mammoth waves rack the liner's steel-knit bow, sick-bay is a busy place for the ship's doctor.

## KEEPING PROGRESS FIT

SCIENCE, invention, discovery have led mankind to many strange lands and seas. The energies of the medical world are highly tested by this constant intermingling of peoples; and the ship's doctor has countless difficult problems under difficult conditions.

This doctor knows that the success of his cases depends in large measure on the assured strength, purity and efficacy of his medicines. To these

requirements John T. Milliken and Company has devoted its highest efforts in the manufacture of pharmaceuticals.

Milliken's products are everywhere recognized as standards of quality. The science of skilled chemists, the efficiency of superior raw drugs, the modern equipment of spotless laboratories—all are unceasingly combined to meet the supreme demand of the medical world.

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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XVII

MUSKOGEE, OKLA., JUNE, 1924

NUMBER 6

"IS IT WELL WITH THEE, IS IT WELL  
WITH THY CHILD."—2 Kings 4:26.

Presidential Address of EVERETT S. LAIN, M. D., Oklahoma State  
Medical Association, Oklahoma City, May 13, 1924.

It is expected in a Presidential Address such as the present occasion affords for the speaker to review the many past achievements of his organization with suggestions for future work.

I shall somewhat depart from this custom, by briefly calling your attention to a birth certificate which has been discovered from which we learn the day and attending physicians when the Oklahoma State Association was born and first uttered a cry for nourishment. I shall then attempt to have you consider with me a complete introspection of our present organization and let us try to determine if we are living up to the highest ideals of our forefathers. And whether or not we are performing our full duty to our noble profession and to the public who look to us for leadership in all matters pertaining to individual or public health.

### HISTORY OF STATE ASSOCIATION

Along with heroic pioneer city and state builders who settled this new state in 1889 there came the family physician and surgeon. History does not separately record the hardships, privations and extreme needs for medical and surgical supplies which, no doubt, the pioneer physicians suffered. Notwithstanding the hardships and privations a group of these early physicians had a vision of a higher sense of duty which they owed to their profession, and together resolved to organize for future generations. This was the beginning of our present State Medical Association.

Incomplete records reveal that as early as May, 1889, a medical organization known as the Indian Territory Medical Association was organized in Muskogee, enrolling about ten members.

At their first meeting Dr. B. F. Fortner of Vinita was elected President and Dr. Oliver Bagby, Secretary. Other Charter members of Indian Territory Association were: Drs. F. B. Fite, J. S. Fulton, J. L. Blakemore, G. W. West, R. L. Fite, J. M. Howard and

E. N. Allen. Meetings were held semi-annually and then annually with but few interruptions until its amalgamation with the Oklahoma State Medical Association at Oklahoma City in May 1906.

Local Medical Societies had also been organized on the Oklahoma side at Guthrie, Oklahoma City, and El Reno, as early as 1890 and 1891. Attempts to organize an Oklahoma Territorial Society had thus far not been successful. In January 1893, The Oklahoma Medical Journal was published and sent out from Guthrie, edited by Dr. E. O. Barker.

In the April issue of this Journal, Dr. Barker called for volunteers to meet him in Oklahoma City, May 9th, the purpose of which was to organize an Oklahoma Territory Medical Association.

Twenty-nine physicians responded to this call, namely: Drs. W. H. Clutter, J. M. Carson, W. H. Snow, E. J. Trader, N. W. Mayginn, Delos Walker, J. R. McElvain, T. A. Cravens, J. A. Hatchett, H. P. Halstead, B. L. Applewhite, S. M. Barnes, W. McKay Dougan, A. A. Davis, J. A. Overstreet, J. E. Fenlon, J. M. Still, C. D. Arnold, A. H. Jackson, C. B. Bradford, E. W. Witten, J. A. Ryan, E. S. Dewey, W. R. Thompson, Henry Walker, J. B. Rolater, H. H. Black, E. O. Barker, H. L. Smith.

(The audience arose to an introduction of a group of Charter Members seated upon the stage and to honor those absent and those who are dead.) Thanks to that Divine Physician who permits these six noble patriarchs of Oklahoma medicine to be with us tonight. At the meeting in Oklahoma City, May 9th, 1893, there was fully organized the first Oklahoma Territory Medical Association with Dr. Delos Walker, President; E. O. Barker, Vice-President, and Dr. C. D. Arnold, Secretary-Treasurer. This same association has been continuously perpetuated, though in 1906 changed its unit of memberships to correspond to the reorganized American Medical Association. Also after statehood the word State was substituted for that of Territory.

Since 1893 many things have transpired in our organization. One of special interest, a

wedding of the Indian Territory Association of the East side with that of Oklahoma, which took place in Oklahoma City in May 1906. Most of the older members present this evening can vividly recall this inspiring occasion.

In a period of thirty-one years we have grown from an original membership of twenty-nine to our present membership of about 1600. We have since established a State Journal which is to be found in the current Medical Libraries of many other states. We have established a Bureau of Medical Defense which is functioning well.

We have accomplished to a degree of success many other laudable undertakings. However, would it not be wise for us at this time to make a careful physical examination of our organization and try to determine if we are over stressing certain portions of the body, if we are taking the proper amount and quality of food and exercise necessary for the development of a full rounded, virile body?

#### INVOICE NEEDED

All successful corporations have learned the absolute necessity of an annual invoice, also for a definite program of work at the beginning of each year. Their Board of Directors order a complete audit of books, check profits and losses, agree upon their most urgent needs and plan the best means of their accomplishment. Have we such a specific Board of Directors. Do our State Officers hold regular meetings? Are we lending our full co-operation and aid to these officers?

#### PROFESSION OF MEDICINE NOT FOR MATERIAL PROFITS

The profession of Medicine is not a profession which has for its aim material profits. Though a qualified physician need not have fears for the necessities of life. Many medical graduates have gone into practice under a delusion of easy and abundant worldly gains, only to meet disappointment, to become disheartened and drop out of medicine into some other profession or business. The temptations and fascinations for wealth have been like a reverse sign board, directing many promising graduates of medicine into the by-roads of shameful quackery.

'Tis true that opportunities come to a few physicians for investments which may later accumulate into enviable profits.

However, to members of our profession who are mentally qualified, and possess a fair degree of personality, built upon a foundation of a good moral character, and who continue to progress in the science of medicine, there is a promise for himself and family the neces-

sities and if he is economical, his declining years may be blessed with most of the comforts and a few of the luxuries of life.

Above all else, however, there is certain to come that inner consciousness of a life given to service to his fellow man, and he shall possess an innumerable host of true loyal friends, who will honor his name to their dying breath. We are a profession of servants of the public. We belong to that peculiar *unselfish profession* whose most skillful and commendable service may consist in preventing disease, thereby lessening our own source of material sustenance.

Centuries before the organization of the Rotary Club, physicians were practicing and demonstrating the truthfulness of the motto, "He profits most who serves best." It is the higher ambitions of life which prompt men to labor unceasingly in research laboratories and clinics searching for a cause and for methods of preventing disease. The curing of a case of malaria or yellow fever by medicinal treatment is good, though the names of Reed, Carroll, Agramonte and Lazear, who submitted their own bodies for experimental research to prove the cause of these diseases, which resulted in the death of Lazear, will live on the pages of medical history for all time.

#### REGULAR MEDICINE LEADS

The establishment of a school for a certain system of treatment is commendable. But the organization of a corps of Sanitary Engineers under a regularly qualified heroic leader, through whose work only was the Panama Canal made possible, is one of the world's greatest scientific accomplishments. Generations unborn shall bless the name of Dr. Wm. Crawford Gorgas.

To Regular medicine belongs the credit for practically all the anatomical and physiological discoveries of the human body.

It was a regularly trained physician who demonstrated the cause of and has given an apparently successful treatment for that dread disease diabetes. It is regular medicine which has subdued the deadly ravages of small pox, diphtheria, tuberculosis and typhoid fever and has reduced alarming infant mortality. It is to the regularly trained physician and his research laboratory to whom the public is looking for a discovery of the cause of that dread disease, cancer.

#### WHY NOT PROGRESS? SUGGESTED PROGRAM

Shall we continue to progress? If so, we must have the co-operative support of an informed public. Several times in the past we have failed in our attempts to raise the

standards of medicine because we failed to create sentiment of the laity who are the greatest beneficiaries.

We have for too long a time, perhaps, due to the tenets and a misinterpretation of our Code of Ethics, neglected to enlighten the public in the matters of the qualifications and achievements of our own profession. Because of this lack of understanding, they have at times not only refused to assist us, but have given their support to defeat some of our most unselfish aims. It is my opinion that all honorable and progressive movements which have been lost is not because the public is against us, but because we failed to conduct proper educational campaigns headed by diplomatic leadership.

We have been modestly attempting to follow that honored old Code of Medical Ethics—the greatest in the world—literally instead of in spirit, as applied to modern times.

I hear you say, "Be careful, you are treading on dangerous ground, you don't mean to say that physicians should advertise." I do not mean advertise, I mean educate. No one, perhaps, realizes more keenly than your speaker, the dangers of a misinterpretation of the motives which actuate physicians. The public press stands eagerly waiting to encourage physicians in such forward movements, and most times, is sympathetic and well intentioned.

No legitimate business organization or profession in modern times can progress or accomplish its greatest good without using some means of reaching the thinking masses in their homes and civic gatherings. The American Medical Association now employs a Medical Editor for the public press.

Your dear sweet wife, who has become so sadly disillusioned, perhaps would not have won you had she not ignored some of the instructions of her dear old mother, or the jealous eye of a female competitor and so sweetly and diplomatically called your attention to her charms and what a wonderful helpmate she could be to you.

Several State Associations have been using paid (if necessary) daily newspaper space, and drafting into service qualified lecturers to go before the public bringing them the truth about medicine, and seeking sympathetic co-operation for further progress.

A few years ago when laboratories took a forward step and began the use of various animals for experimental research, you recall that organization known as anti-vivisectionists and their sensational efforts before legislatures. What darkness might still pre-

vail in such diseases as syphilis and tuberculosis had they succeeded.

How did we prevent such adverse legislation? A few well edited articles in the daily press and numerous public addresses calling attention of the ladies in particular to the feathered birds on their beautiful hats, and to the comfortable animal furs around their necks. The public was soon convinced and the leadership of the Antis was put to shame.

All forward movements of any nature, all beneficent acquisitions of either a worldly or celestial goal have come through sacrificial service. There is much needed and can be done in this state by our profession. A few of which the least sanguine among you will agree with me is possible. We have not time to enumerate all. May I just briefly mention a few?

There are several amendments to our Constitution and By-laws which may be necessary before active steps can be taken toward their realization. Other states have already made these revisions. One of which is a Board of Trustees, whose function is to handle all matters of a strictly financial nature, look ahead, and to outline a program of public policy for their Association. Another, a Judicial Council of Education to handle all such matters as public or professional education. They have also clarified many vague clauses in their By-laws pertaining to, and dealing with their members' relationship to County and State Associations. Such matters as these I shall take up at the proper time with the House of Delegates.

At this time, I wish to specifically present for your consideration matters which are apparently within a possibility of attainment from which every physician as well as the public will receive lasting benefits.

There might be established in adequately equipped hospitals, located in densely populated cities of our state where plenty of clinical material is available, one or two weeks each year of free Post-Graduate Schools for the teaching of the late methods of diagnosis and new discoveries in treatment.

#### STATE MEDICAL LIBRARY

The time is now ripe for the establishment in some central, conveniently located city of our state, a Medical Library. Every physician who has had an unusual case to study or has been called upon to write a paper has keenly felt such need.

This might be done at a modest expense if in connection with club rooms and library of some county society with our State Secretary-

Editor or the local County Secretary in charge.

A MEETING OF AMERICAN MEDICAL ASSOCIATION  
IN OUR STATE

A campaign was started last year by several men who have taken time to visualize its lasting and immeasurable benefits, the securing of a meeting of our Great American Medical Association within our state. The winning of such a meeting would not be of direct material profit except to business industries of the city in which it is held. It would also demand great sacrifice of time, money and labor to members of our profession. Though the inspiration and educational value which would come to every member who attends or reads its pages of work and to the entire citizenship of this great state would be lasting and immeasurable.

We have on file accurate listings of hotel capacity and other information such as space for meetings and exhibits which we may prove our claims of ability to handle such a meeting.

No individual be he a hod-carrier or a doctor ever rises higher than his ambitions. No organization accomplishes larger things than that upon which it judiciously concentrates and sacrifices to attain. Shall our State Association always remain satisfied by running cautiously in low which we agree is not so conducive to accident or cerebral exhaustion? Or shall we shift into intermediate and then, when upon good roads into high, thereby reaching the goal of our journey with a saving of time, less wear on our motive power and with a far greater exhilaration?

It is my judgment that if we will launch out into wider fields of education and development which have been carefully planned by our present council or perhaps better by a Judicial and Public Policy Committee, then we shall more fully realize the dreams of our noble fathers and organizers of Oklahoma Medicine.

Shall we remain only as a State unit, or shall we plan a progressive program, organize new departments, make ourselves worthy of recognition upon all programs or representation in all official meetings of our American Medical Association?

Let us make Oklahoma State Medical Association second to none in the United States.

SOME PERSONAL OBSERVATIONS ON  
UROLOGICAL PROBLEMS.\*

JOHN Z. MRAZ, M.D.  
OKLAHOMA CITY

So much intensive study has been devoted to the physiology and pathology of the organs comprising the genito urinary tract that a truly remarkable degree of progress has been achieved in the specialized field now known as Urology. In fact it can probably be said, without fear of contradiction, that no other specialty has exceeded it in this respect.

The writer will, therefore, not attempt even to name the numerous advances that have been attained but will deal in more or less detail with a few observations which have impressed him as being worthy of discussion.

The subject of kidney infection is one which has been thoroughly studied in all its different phases. It has been shown that kidney infections rarely, if ever, are primary. In other words, when once we definitely establish that a kidney is the seat of an infective process, we may be practically sure that it has had its source in some pre-existing focus more or less distant from it.

The bacteria produced by these foci find their way into the blood or lymph stream and develop a selective affinity for the urinary tract; or they find the kidney a favorable place to lodge and develop by reason of the fact that something has served to lower the natural resistance of this organ.

This brings us to the subject of local accessory factors of kidney infection. Among these may be mentioned nephroptosis; ureter kink; stone in kidney or ureter and ureter stricture. Obstructions in the vesical neck region or in the urethra also serve to cripple kidney function and invite infection.

As a result of this knowledge rational and effective means of dealing with kidney infections have been evolved. It has been demonstrated that the direct therapeutic attack upon the infection itself is not sufficient. In fact it may well be that it is the least important of the measures to be employed. Infected foci must be sought for and eradicated. We must not stop at the tonsil, teeth and nasal sinuses, but must remember that the source may be found in the colon, ap-

\* Chairman's Address; read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Oklahoma State Medical Association Annual Meeting, Oklahoma City, May 13, 14, 15, 1924.

pendix, gall bladder, prostate, seminal vesicle, female genital tract or in the infected skin. The seminal vesicle, although frequently overlooked, may be an especially potent factor for by virtue of its anatomical location it may furnish both the bacterial source of infection and the local crippling action on the kidney by pressure upon the lower end of the ureter.

Here again, as in the case of the foci of infection, a search must be instituted to locate the particular factor operative on the case in hand. This may be comparatively simple or it may necessitate a more or less exhaustive study of the patient.

A rectal examination, which by the way should never be omitted in the male, will disclose the condition of the prostate and seminal vesicle, the sound or bulbous bougie will inform us as to urethral stricture, the cystoscope, will tell us the condition of the vesical neck while the radiogram made both before and after the injection of the pelvis and ureter with some shadow casting fluid will enlighten us relative to stone, nephroptosis, ureter kink and ureter stricture. It must also be remembered that some intra-abdominal mass may be exerting pressure on the ureter and even the rare condition of ureteral neoplasm and ureterocele must be thought of in this connection.

In this as in any other diagnostic problem it is well, no doubt, to think first of the more common conditions, yet it is only by bearing in mind the rarer possibilities that we are occasionally rewarded by uncovering some unusual and perhaps serious condition early enough to be of practical benefit to the patient.

Before leaving this subject I wish to suggest that although we as urologists admit the truth of the foregoing statements, there is a tendency to disregard them in certain cases.

It is easy to go directly to the patient's trouble (that of kidney infection) and treat it by one of the several approved methods. In so doing we improve or even temporarily clear up the patients condition thus making him feel better while putting him to the least possible trouble and expense.

It is much more difficult to painstakingly search for the source of the trouble and for the local factor which is causing it to persist. It is also more difficult to persuade the patient that it will be necessary to spend considerable time in investigation and then that he will have to undergo one or more operative procedures or be subject to some more or less lengthy and expensive treatment in addition to that for which he consults the Urologist. Especially is this true when, as sometimes happens, he comes with the idea that one or two

treatments will restore him to complete health and quotes as his authority his family physician. Nevertheless if we wish to avoid only half treating our patient it is necessary that we explain the circumstances in detail and if this is done in careful and not too technical language he will usually be convinced and be willing to follow our advice.

There is one factor among those cited above which I believe is overlooked more often than any other, and which, because of its frequency and importance deserves emphasis. I refer to ureter stricture. It should be suspected in every case of kidney infection where one of the other factors cannot be demonstrated. In fact it is often co-existent with them. For example a ureter stricture often precedes and is responsible for a hydronephrosis, nephroptosis, ureter kink or stone even before any infection is present.

When it is tight enough to offer obstruction to the passage of a ureter catheter its diagnosis is easy, but when it does not do this it may be readily overlooked. I have often passed a No. 6 catheter into a ureter without the slightest difficulty only to find on ureteropyelography a ureter more or less dilated above a constriction usually situated within six or eight centimeters of the bladder.

In addition, one often finds a beginning pelvic dilation with or without infection. If infection is absent the dilatation will usually be found to be only moderate. But after infection takes place in the presence of a ureter stricture, the dilatation of both ureter and pelvis will usually be found to be directly proportionate to its intensity and duration.

It has happened a number of times in the writer's experience that a kidney infection refused to clear up or improved only temporarily under the usual treatment, but a cure was rapidly obtained after thorough dilatation of the ureter with the graduated wax bulb in the female or the Walther dilator in the male.

A word of caution may not be amiss here relative to some of the newer methods of treating kidney infections. The writer refers to the use of certain bactericidal remedies administered orally or intravenously such as acriflavine, mercurochrome, hexamethylene, tetramine, etc. The treatment is easy of application, requires but little time or exertion either on the part of the patient or physician and the immediate results are often strikingly good. There can be little doubt, however, that unless we attend (as suggested above) to the associated factors which have a direct bearing upon these cases, many of them will return later having a recurrence of their

trouble and with possibly permanently crippled kidneys.

Endo-ureteral manipulations to induce the passage of ureteral stone is one of the later achievements of Urology. The method has been quite successful and as we perfect our technique we are enabled to facilitate the passage of even some of the larger stones. It certainly should be attempted in all cases before resorting to operation excepting only when the size of the stone precludes its passage or in emergency conditions such as calculous anuria, in which case the stone must be removed without delay.

The causation of stone in kidney or ureter is still an unsolved problem but we must at least concede the possibility that some of these concretions may form as the direct result of ureter stricture. This is an additional argument in favor of the endo-ureteral method for by dilatation of the stricture we, in a measure, insure the patient against recurrence.

Just as the endo-ureteral treatment of ureteral stone should be encouraged so should the endo-vesical management of vesical calculous.

It is true that in the present high state of aseptic surgery the mortality of operative removal of bladder stone has been reduced to a very small percent. Yet the possibility of accidental tearing of the peritoneum and contamination with an infected urine is always present as is a troublesome and sometimes serious infection of the space of Retzius. To this must be added the necessary hospitalization with its loss of time to the patient.

One the other hand we may crush and remove most bladder stones with the Bigelow lithotrite and evacuator with but slight inconvenience to the patient, practically no loss of time and, what is more important, an almost negligible risk to life.

The writer has used this instrument with a great deal of satisfaction and believes that the apparent disfavor into which it has fallen with the profession is entirely undeserved.

This is not to be understood as an argument against operation when the indications for surgical intervention are definite. But it must be said to the credit of Urology that many conditions which formerly necessitated operative procedure are now handled by non-operative means to the great satisfaction of both patient and physician.

## EARLY DIAGNOSIS IN HYPER-THYROIDISM\*

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The studies on the thyroid gland with the knowledge thus attained, have shown so clearly the influence of it on the development and metabolism of the body that they have stimulated an interest in other endocrine glands, many of which will be proved no doubt, to play a minor, and some an important role in correlating the many functions essential to health and normal life. It is true that so far, we are at sea in the direct application of much of the knowledge attained in the study of endocrine glands, voluminous work, though, is being reported and it should not be long until intelligent use of this work can be therapeutically applied. At present we are too frequently blindly following the technic exploited by some of the so-called laboratories of the commercial type. There is a tendency for our profession to become too enthusiastic over the new and unproved, to accept too readily as conclusive that which was intended by the investigator as only a preliminary report. Fortunately, from most of the "fads" we soon recover, clinical experience, and trained judgment soon asserts itself and the valuable portion of most is reduced to something that can be practically applied.

Through the work of Kendal, Plumber and their co-workers in their studies on metabolism, definite knowledge not before possessed has been gained as to thyroid function. We have long known that the thyroid in some way influenced the normal development of the body, that its continued activity was essential to life, its normal activity to health, but it has been only recently that its control of metabolism has been proved, not only this, but that thyroxin is the essential element in its output that does this. Estimation of the basal metabolic rate gives us a pretty definite index to thyroid activity. Mayo says that "If the thyroid is functioning, the metabolism is normal or above. If metabolism is plus 15 or minus 15 per cent, it is probable that the thyroid is abnormal." Each cell probably has its normal rate of activity when the thyroid is furnishing a normal amount of thyroxin, vary this, and the cells activity is increased or decreased within certain limits and conditions, directly in proportion to the amount of thyroxin which finds its way into

\* Chairman's Address; read before Section on Surgery and Gynecology, Oklahoma State Medical Association Annual Meeting, Oklahoma City, May 13, 14, 15, 1924.

the blood stream. We measure metabolic rate by determining the oxygen intake and test the expired air for the amount of carbon that is being burned in the body.

While we are apparently no further today than we have been for many years in our knowledge of the cause of the pathology in the thyroid, our knowledge of the pathological change causing the symptoms is much greater, particularly in reference to hyperthyroidism.

The study of the large number of specimens removed by operation shows definitely that in the exophthalmic type, over activity of the gland is due to a parenchymal cell hypertrophy, and hyperplasia with a diffuse hyperemia. While these findings are constant, they each may vary depending on the stage of the disease. The toxic adenomas have long puzzled us from a pathological standpoint, but the recent work of Wilson shows pretty definitely that here too we have hypertrophy and hyperplasia of parenchymal cells to account for the symptoms, acting either as a producer of thyroxin or as a liberator of stored up thyroxin in colloid.

Hyper-thyroidism is one of the most important train of symptoms that we are called on to treat as a result of pathology in the thyroid gland. To treat it most successfully and safely for the patient, an early diagnosis is most important. The early symptoms are fairly definite and it only remains for us to differentiate them from such diseases as early tuberculosis, neurasthenia, etc., which, with modern laboratory methods becomes comparatively easy. If we only operated on cancer of the breast when the diagnosis had been made from the classical text book picture of the disease, how many cases would we save? The same applies to thyroid cases, except perhaps as regards life. In the classical text book cases the process is far advanced. Hazardous surgery is necessary to arrest the process. Permanently crippled organs cannot be restored.

In the diagnosis of hyperthyroidism, two distinctly clinical and pathological groups are recognized and we shall deal with them separately. Too long have we been confused by our classification of hyperthyroidism, using as we have the term as synonymous with Graves disease, exophthalmic goiter, thyrotoxicosis, etc. Our work is much simplified when we recognize that we are dealing with two distinct conditions, one exophthalmic goiter, the other, adenoma of the thyroid with hyperthyroidism.

Exophthalmic goiter may appear at any age, but it is much more common after the beginning of the third decade of life. Many

cases develop rapidly so that in a few weeks intense toxemia is present, while in others the onset is slow, some months intervening before marked symptoms develop. A few go rapidly on to severe crisis and even death, but in most there is a remission only to be followed by other crisis, each leaving permanent damage to the vital organs. There are a few that progress chronically, never reaching the stage of a true crisis. In a large group of cases a careful history will bring out the fact that the condition has existed in a mild form for some time. Some of these cases we see and are able to diagnose very early. I believe we should see more of them. Nervousness, tachy-cardia, tremor, moist skin and loss of strength and weight, even in the absence of perceptible enlargement of the thyroid gland, should demand a differentiation from other conditions that might explain them. A careful physical examination might still leave us in doubt and often does, in eliminating such common conditions as tuberculosis and that nervous syndrome termed neurasthenia, neuro-circulatory asthenia, psychithenia, etc., but when we turn to the laboratory, we find an aid in the metabolic test which is almost certain. A plus 15 or above means that we are dealing with early hyperthyroidism. The absence of nodular tumors in the thyroid indicate an early exophthalmic goiter. Only a few rare conditions other than parenchymal hypertrophy and hyperplasia of the thyroid gland will cause increased metabolism. Operation in these early, difficultly diagnosed cases is fairly safe. The terminal results are uniformly good. Contrast this with the later case which can be diagnosed across the street, with the long and tedious preparation often required, the technical difficulties often encountered, the permanent damage that is unrelieved, then the importance of early diagnosis is realized.

Medical management in these cases except in preparation for operation, is unwise unless operation is contra-indicated because of some other condition. The permanent cure is rare and clinical experience has shown us that most of these cases come to operation later, many when such a procedure is extremely dangerous. X-ray and radium and the various injections of the gland, except in preparation for operation, belong in the same class and only serve to place the patient in a false sense of security and make operation later more difficult, and occasionally lose for the patient that golden time when recovery is possible. Exophthalmic goiter develops in most cases in patients who have not previously had a goiter, occasionally though we encounter true exophthalmic goiter in an indi-

vidual who has had an adenoma for years. The presence of the adenoma does not preclude the development of this condition, and in the absence of exophthalmus, the microscope may be necessary to make the differentiation.

Adenoma of the thyroid with hyperthyroidism usually comes on in middle life in patients who have had adenomas in the gland for a number of years and is characterized by increased metabolic rate, nervousness, tachycardia, loss in strength and weight and a tendency to hypertension, and in the later stages, myocardial degeneration. Most of the cases are above forty years in age and have had a nodular goiter for from sixteen to eighteen years. For a long period the adenoma causes no symptoms except possibly those due to pressure. A careful history in nearly all of the cases of hyperthyroidism of this type will disclose that for a period of three or four years there has been a gradual decline of health. The patient will admit that there has developed increased nervousness and excitability, a loss of weight in spite of an excellent appetite, moist skin and a realization that the heart is beating faster and harder, that he tires more easily, and an examination will reveal an increased blood pressure and a metabolic rate above normal. Later there is an increase of these symptoms, tremor develops, often the adenoma increase in size and dyspnea on exertion interferes with normal activity. Later still, myocardial degeneration becomes evident, but even in these advanced cases exophthalmus and the gastrointestinal crises so frequently found in exophthalmic goiter are absent. The rapidity with which these symptoms develop and the height that they reach, depend on several factors. Individual susceptibility to the over secretion, and the rapidity of the development of the process undoubtedly varies in the individual case. The age of the heart muscle, the stress and strain of modern life, and the condition of the blood vessels undoubtedly influence these factors, but aside from this, experience has taught us that once this process is established, a gradual increase of the symptoms leading to serious disability is pretty certain. Early in the disease the insidious and slow, but positive development of the symptoms, coupled with the presence of a long existing adenoma, should enable us to make a diagnosis early. Such a large percent of adenomas becomes toxic if allowed to remain in the thyroid that much can be done in a prophylactic way by removing them after the age of twenty-four years. An early diagnosis enables us to operate these cases with a very low mortality and a high percentage of complete cures. Late operation is extremely haz-

ardous in many cases, and while the continued hyperthyroidism is relieved in most successful cases, the damaged heart muscle cannot be restored.

Patients with early tuberculosis and those nervous cases with the cardiac syndrome often have goiters. Careful examination and due consideration of the history, with a repeated metabolic rate, should immediately clear up the diagnosis.

Medical management, x-ray and injections in these cases should not be used as curative measures. They will only serve to postpone the time, and time is an important element in this condition, of surgical requirement and make it more difficult to carry out.

Goiter is increasing in our section of the country. While sufficient time has not elapsed to determine the results of the treatment of girls at the age of puberty by the systematic use of iodides, we do know this type of goiter rapidly disappears under this form of treatment. Some investigators believe that the untreated cases of this type become the adenomatous cases of later life. Until something better in the way of prophylaxis is advocated I believe we should search out and treat these girls.

The results of operation in hyperthyroidism are not always satisfactory nor safe because we get our patient too late. In the light of our present knowledge though, surgery is the best we have to offer and if we are alert, a great percentage of the cases can be diagnosed at a time when operation will offer a much better hope for relief.

#### THE DEVELOPMENT OF THE SPECIALTY OF EYE, EAR, NOSE AND THROAT, AND ITS RELATION TO GENERAL MEDICINE AND SURGERY\*

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The subject which I have chosen for a few remarks is, as you will all readily admit, an exceedingly broad one, needing hours for its careful consideration where we can only yield to it minutes, and therefore if I touch only a few of its many important phases, you will know that it is from necessity, and not entirely from choice, for nothing is more interesting than reading of the development, by the ancient peoples of the earth, of the work which we are now carrying on.

\* Chairman's Address; read before Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association Annual Meeting, Oklahoma City, May 13, 14, 15, 1924

The first mention of ophthalmology dates back to about 2250 B. C., to the writings of the ancient Babylonians and Assyrians. The first records of any consequence, however, are found in the writings of the Egyptians, about 1650 B. C. They name many ocular diseases, but describe none in detail; numerous prescriptions were given, which are now only valuable historically. In the latter part of the second century, A. D., we find an article by the Greek writers on "Optics" and another on "Diagnostics on Diseases of the Eye," both of which have been lost thru the centuries. Many of their ideas of even these early days are remarkably clear and explicit, and not entirely different from those of our present day treatment; e.g. "In severe cases of trachoma, physicians have in their perplexity, thought out a singular remedy, namely, having everted the lids, to cleanse them thoroughly, and then to scrape them off without the application of drugs. A few scrape only superficially, with a small sharp spoon, and afterward wipe up with a soft sponge, all that flows away." "One of my teachers," one writer tells us, "even prepared an eye pencil of pumice stone, and having everted the lids, rubbed the roughness away with this instrument. When under the employment of the pencil mentioned, the discharge begins to cease, then we may venture to rub into the lids purifying medicines, at first only weak solutions, and later, if the patient bear it well, we should gradually strengthen it."

During the Middle Ages, we find the French writers quite prolific with ophthalmic literature, most of which is interesting reading, but contributes little to the advancement of ophthalmology. The first work to be preserved entire, was written during the first half of the 11th century, "A Memorandum Book for Eye Doctors." Some of their ideas are expressed as follows. "Cataract is a cuticular blemish in the eye, in front of the pupil, which disturbs the sight. It consists of a foreign humor, which gradually descends into the eye, and hardens in consequence of the eye's coldness. Whether this humor collects between the cornea and the iris, or between the aqueous humor and the crystalline lens, does not interest me just now. The first stage is called 'The Illusion of Sight,' the second 'The Falling of the Water,' the third or last 'Cataract'."

The Germans, who in later years became such prolific contributors to ophthalmic literature, published their first work in the latter part of the 14th century. The 16th century contributed practically nothing, and with the exception of its development in optics, the 17th century contributed but little

more to the development of ophthalmology. The 18th century saw the development of the modern operation for cataract, and the making of an artificial pupil. And so we come down to the 19th century, the greatest of them all, in which more has been done than in all the ages of time that have gone on before. Will as much be accomplished in the century in which we are now well started?

The operation for strabismus was first done in the early part of the 19th century, altho the operation was not perfected until many years later. Sclerotomy, and later iridectomy for glaucoma was done about 1854, altho the excavation of the nerve head was not diagnosed until 1858, seven years after the invention of the ophthalmoscope. Until the beginning of the 18th century the term "glaucoma" was indiscriminately applied to cataract, as well as many other conditions of the eye, none of which were at all understood. While the operation for cataract was first done about the year 1784, very much as we do it today, the linear extraction was not done until 1866.

In looking up the early history and development of the work of otology, rhinology and laryngology, I was surprised to find that special attention was given to it nearly 4000 years ago; in fact, probably the oldest prescription that exists in the world today, a prescription that has come down from the ancient Egyptians, is for the treatment of a symptomatic throat condition. The earliest medical record obtainable, is the medical record of ancient Egypt, and is dated about 1800 B. C. In this record we find repeated accounts of treatments for nose and throat conditions, and inhalations, astringent sprays, and gargles were used, even as they are used today. Fumigation was very popular among these ancient peoples, and among other conditions, our globus hystericus was thus apparently successfully treated.

Among the ancient Greeks, the necessity for special treatment for nose and throat condition was recognized. Hippocrates, "The Father of Medicine" paid especial attention to the throat, evidently recognizing the fact that disorders here could produce serious conditions locally, as well as elsewhere thruout the body.

The middle ages would be almost the last period in history where we would expect to find any development of the surgical specialties; however, nose, throat and ear conditions received a great deal of attention, and there is much evidence of what was accomplished. The eustachian tube was first described in 570 B. C. and the cochlea in 400 B. C. The physicians of that time divided the anginas

into four kinds—the first, a simple inflammation of the throat; second, entire absence of inflammation, but with a sense of suffocation; third, an inflammation extending up toward the chin, and involving the entire depth of the structures of the neck; fourth, an affection of the neck, due, as they thought, to an inflammation of the vertebra—our retro-pharyngeal abscess. They speak of the tonsils as glands to be treated with astringent remedies, and as a last resort to be excised, and give a very clear and concise description of the method of excision. They recommend a mixture of cold water and vinegar to be held in the mouth after the operation to check the flow of blood. This writer is so very explicit in his instructions, as to lead one to believe that he might have had some trouble with post-operative hemorrhage, following tonsillectomy.

Toward the close of the middle ages we find some very important contributions concerning diseases of the nose and throat; these include some very interesting descriptions of inflammations of the tonsils, with definite directions for opening a peri-tonsillar abscess. They describe a condition near the epiglottis, "which impedes the voice, and obstructs the trachea, and which is relieved only by surgical intervention"—a condition which we recognize as edema of the glottis. About this time also, we begin to find names and descriptions of various special instruments for these various operations.

About the middle of the 13th century, various of the Italian physicians made special studies of intra-nasal conditions which disturb breathing. They describe several varieties of nasal polyp, and differentiate between polypi and malignant tumor of the nose, with advice to leave the latter alone, as they could do it no good, and would probably only succeed in making it worse. A suggested method of removing polypi, was to draw them down with a hook, cut them off with a knife, and then shave off any remaining portion. The cautery, in the form of a hot iron was used on the stump to prevent any recurrence. For obstruction of the back part of the nose and naso-pharynx, a string with knots at intervals, was passed thru the nose and out thru the mouth, and then by a to-and-fro motion the growths and hypertrophies were removed. One is led to wonder how enthusiastic these patients were over these operations, and whether these physicians were overwhelmed with referred work.

Following the considerable amount of work done during the 13th and 14th centuries, the investigations along this line practically ceased, and were not taken up again until nearly 500 years later when it devolved upon

the surgeons of a new world to take up and continue to its present perfected state, the specialty of ear, nose and throat, as we know it today.

One writer states that the history of laryngology and rhinology begins with the year 1858, with the introduction and the use of the laryngoscope and the rhinoscope, and the study of diseases of the upper air passages. In 1855 the first public throat clinic in this country, and probably in the world was established, and the departments of otology, laryngology, and rhinology became important features of at least two of the medical schools of the country. Since that time the development of our work has been exceedingly rapid, and during the last two generations has evolved into a separate and distinct specialty. Today, thanks to the untiring efforts of some who have passed on to their reward, and many who still labor thru the heat of the day, I am undoubtedly safe in saying, it is the most highly developed specialty in the realm of either medicine or surgery.

The last two decades have seen many of the niceties of our operative work established, the submucous resection of the nasal septum, the complete enucleation of the tonsil, various operations upon the sinuses and the lachrymal apparatus, and many others, are all comparative recent improvements and additions to our former methods, not a few of which have doubtless occurred within the memory of many in this section.

But what of the present status of our specialty, and what the relation of the men in it to the great army of medical men doing the broader work of general medicine and surgery? This has become an age of specialization, not only in medical fields, but in mechanics, the skilled trades, and in practically all lines of endeavor, and nowhere is the specialist more sorely needed, and nowhere does he play his part better than in this field of which we are a part. The oculist, instead of being looked upon as a mere refractionist, is now recognized as one not only skilled in diseases of the eye alone, but in the general physical infirmities of the body as well. What oculist has not been called upon to prescribe lenses for the poor vision of some patient, and found upon making a fundus examination, the ravages of Bright's disease plainly visible, and passed the patient on to his proper place for dietetic and general treatment? What oculist has not been called upon to differentiate between the inflamed nerve of a luetic retinitis, and the congestion caused by a tumor of the brain, and had the surgeon listen to his verdict, to operate or not to operate, and act accordingly? But it is not merely

these conditions mentioned that we are called upon to differentiate and diagnose, but numerous of the more serious of human ailments are daily being referred for our dark room verdicts. The general practitioner has come to recognize that there are causes of headache that are nearer the head than the stomach or transverse colon, and that some dizziness and vertigo is not due to high blood pressure or constipation, altho we all recognize that these latter conditions play their part therein.

In the fields of Otolaryngology, Rhinology and Laryngology, we have also taken our place in the broader aspect of medical and surgical endeavor. The now well demonstrated and accepted theory of focal infection, while of very recent origin, nevertheless, in my opinion marks a milestone in the pathway of medical progress, and will remain as one of the important developments of the present generation in medicine; and in the development of this theory, and in its demonstration, the rhinologist, laryngologist and otologist has played a major part. The general practitioner has long since recognized, and even the laity are beginning to recognize many of the common symptoms of chronic toxic absorption, and to seek out the specialist for eradication of the infected focus. We are expected, by the general practitioner to bring more skill in examination and diagnosis, and a more detailed knowledge to bear upon the limited field of our endeavor, and rightly so; and the public look to us for proper diagnoses, and relief of their symptoms. If we work out our daily problems, in the light of the latest knowledge upon the subject, not as narrow specialists, but as broad practitioners of medicine, we will not prove unworthy of the trust reposed in us, and of the profession we seek to honor, and we will be able, in the fullness of time, to lay down our work, conscious that we have run a good race, and have kept the faith.

### SUBACUTE BACTERIAL ENDOCARDITIS\*

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OKLAHOMA CITY

The recognition of a distinct form of endocarditis called by some Subacute Bacterial, (Libman), by others, Endocarditis Lenta, (Schottmueller, 1910), Chronic Malignant Endocarditis (Weber), Chronic Septicemic Endocarditis (Riesman) and Chronic Infec-

tive Endocarditis has been of comparatively recent date and slow evolution.

W. Seuhouse Kirkes wrote the first clear description of the remote mechanical effects of endocarditis in 1852. In 1868 Samuel Wilks wrote on "Pyæmia as a result of Endocarditis," described a case of infectious endocarditis of six months' duration, substantiated the diagnosis by autopsy and called attention to the fact that at that time endocarditis had never been systematically considered in the text books on medicine. Literature was subsequently enriched by the contributions of Parks Weber, 1910; Osler, 1912; Libman, 1912; Riesman, 1918; and Auerbach, 1920. In 1899 Mabel Austin described the first case due to *Bacillus Influenza*.

Ebstein in 1899 says chronic cases of malignant endocarditis are much more frequent than was formerly supposed. E. G. Janeway in the same year suggested the disease is increasing in frequency; Libman 1918 says that the frequency of the disease has been much underestimated. Thomas Lewis in 1920 says the disease is not common but is often overlooked. Libman, 1920, says he has seen more than three hundred cases. It assumed such commanding interest by virtue of the intensive study of heart conditions and the increasing number of cases due to the late war, that the British Medical Society had a symposium on this malady in 1920 and the wealth of literature which has recently sprung up in this as well as other countries present the best argument of its importance. Sir Thomas Horder thinks that one out of two hundred patients admitted to the medical wards of a general hospital suffer from subacute bacterial endocarditis.

The disease is of great importance partly on account of the difficulties often identifying it but still more on account of its long duration and the obstinacy against treatment. Janeway first described the cure of a gonococcic endocarditis. Murry reports 1 per cent in two hundred cases, Libman has seen four recoveries and claims that these cases sometime become bacteria free at times.

Osler says the protean character of the malady, the latency of the cardiac symptoms and the close simulation of other disorder combine to render the detection more difficult.

Virchow in 1855 first suggested the infectious origin of the endocarditis associated with uterine infections and attention was thereafter directed to the finding of bacteria in the vegetations in both ulcerative and verrucous endocarditis. Weiger in 1869 reported where he found micrococci in the vegetations of acute ulcerative endocarditis.

\* Chairman's Address; read before Section on General Medicine, Neurology, Pathology and Bacteriology, Oklahoma State Medical Association Annual Meeting, Oklahoma City, May 13, 14, 15, 1924.

Rosenbach produced endocarditis by puncturing the aortic valves and then injecting pyogenic streptococci. Ribbert produced acute endocarditis by injecting suspensions of staphylococci in particles of potato hence it is recognized now that a previous valve defect or trauma is a *sine quo non* in the causation of the disease. Murry claims extension to a companion valve by direct extension along the aortic cusp of the mitral valve and by flapping of this cusp against the vegetations on the aortic valve. Valves which have been previously thickened as a result of old rheumatic inflammation are much less resistant and become an easy prey. Over 50 per cent of cases coming under this class. If we could prevent rheumatic fever we could prevent nearly all these cases (Libman). Some time usually elapses between the two conditions. The increased vascularity of the valves make them more vulnerable as a catarrhal throat is more susceptible to diphtheritic or other infection.

This necessarily would not bring into this classification those acute cases in which you can get cultures of various bacteria due to acute infectious disease such as pneumonia, meningitis, gonorrhea, typhoid and others, unless there is a corresponding evidence of change in the valves.

Libman reports a number of cases of valvular disease in which bacteraemia of one kind or another arise from a primary purulent focus and in which no recent lesion was found in the valves of the heart or on the mural epithelium. He calls these cases valvular defects with intercurrent bacteraemia, many of them being terminal infections.

Rheumatic endocarditis is not counted as a bacterial endocarditis. We do not know what it is. The combination of syphilitic endocarditis and bacterial endocarditis is a rarity.

Libman writes (1912) that he has seen over 250 cases of subacute bacterial endocarditis and that non-hemolytic streptococci (Viridans) was the organism in over 95 per cent of the cases, the remaining cases due to influenza bacillus. *Streptococcus viridans* was found in only 80 per cent (Murry).

From a clinical study of the cases (Thayer) it would seem that gonococcal endocarditis has a malignancy between that of malignant streptococcus, staphylococcus and pneumococcus on one hand and that of the slower viridans or influenzal on the other.

Netter emphasizes that pneumococcal endocarditis involves the right side of the heart one-sixth times as often as the left, whereas, by other organisms one-nineteenth as often. He also observes that endocarditis

following pneumoia is frequently associated with meningitis.

The gonococcus usually involves previously undiseased valves.

The bacteria from some long neglected inflammation or even the intestinal tract make their way into the blood stream and lodge generally on the aortic or mitral valve more rarely the tricuspid.

Hence, it is of great importance to see that no focus of infection remains where by lessened resistance allows entrance to the blood stream. The bactericidal power of blood and liver obviously keeps down the incidence of this trouble to a minimum but where a viridans is found in vegetations and crippled heart valves these bacteria preempt their homestead and are extremely hard to eradicate.

These vegetations and clumps of bacteria are frequently broken off and carried by the blood stream produce infarcts which are sometimes the first clinical evidence of the disease. One such case in St. Anthony's at present caused a thrombus of one of the arteries of the leg with gangrene of the foot. Infarct of the kidney, mycotic, embolism of the spleen or brain producing hemiplegia or sudden death and even in the skin causing petechral hemorrhages which are so characteristic of the trouble. Pulmonary infarcts are exceedingly rare. I have never so diagnosed one and literature seems not to record any such cases obviously due to the fact that right heart involvement from which pulmonary emboli is produced is a rarity. These petechral hemorrhages usually come in showers and have a white center.

Osler's nodes are not so common while petechia are quite frequent. They are small indurated painful areas appearing suddenly on hands and feet most commonly on distal phalanx near the nail where they are less in size than a split pea. They appear suddenly, are painful to touch and patient feels as though some one had stuck him with a pin.

Libman describes a soreness over the end of the sternum as being a fairly constant symptom, but I have failed to see only one of these in my cases. The striking features of some cases is a peculiar diffuse brown or cafe au lait color of the face. The rest of the body may show some pigmentation.

Arnett said "the spleen is frequently found greatly enlarged in patients dying of this trouble and this enlargement occurred independently of liver enlargement. The hemorrhagic form of simulating splenic anaemia and perhaps better called spleno-megalic form as hemorrhages are not always a prominent feature. Splenic enlargement was also

found in cases of mere chronic streptococcic infection and about half as frequently in chronic cardiac disease, although it is impossible to arrive at any definite conclusion as to the cause of splenic enlargement, the evidence points toward infection rather than back pressure or infarction as being the factor in causing the spleen to enlarge."

Enlargement of the spleen is an important diagnostic sign in subacute endocarditis, a condition which is frequently overlooked.

Sudden excruciating pains are often felt in the region of these organs and presumably due to infarcts within the parenchyma involving the capsules of the organ.

One case I had a surgeon to see her with a possibility of its being a gall bladder case since the tenderness and pain pointed to that region, but after watching her a few days, an equally severe pain occurred in the region of spleen and subsequently in lower right quadrant.

Cotton says "In cases of structural heart diseases occurring amongst adults clubbing of the fingers is usually associated with subacute infective endocarditis. Although clubbing of the fingers is not to be regarded as a conclusive sign of infection, it is nevertheless one of the most valuable signs we possess in coming to correct diagnosis. In 579 cases of structural diseases of the heart, clubbing of fingers was noted in 63 instances. These 63 cases have been subject to careful and prolonged investigation and after histories have been followed until death or periods in no case less than eighteen months from date of diagnosis. Forty-four of these cases at the time of first examination or subsequently proved to be cases of subacute infectious endocarditis. Post mortem confirmation in seventeen cases."

Infarct of the kidney is more familiar to the pathologist than clinician, yet pain and tenderness in region of kidneys, red blood cells in the urine with rise of temperature is quite sure to be an indication of this kidney complication.

"The problem of embolic phenomena in valvular disease has been studied by Libman in connection with subacute bacterial endocarditis in the healing or healed stage. In his opinion valvular defects per se do not provide emboli which produce clinically recognizable phenomena. When such phenomena does occur in patients with chronic valvular disease and bacteria free blood, the presumption is strong that the rheumatic infection has been followed by bacterial invasion which has gone on to spontaneous healing.

It is important to remember that while infarcts occurring in the active bacterial stage

of the disease do not suppurate. Nevertheless the emboli producing these lesions are not aseptic."

At varying periods after the onset of subacute bacterial endocarditis this accompanying nephritis clinically begins to assume increasing importance and the case may assume nephritic rather than cardiac syndrome, the face assuming a swollen and pasty character. Influenza endocarditis more frequently takes on this type.

The renal insufficiency is due to glomerulonephritis and not to the small lesions in the glomeruli described by Loahlin.

Fever is a dominant feature in most cases, probably always present at some period of the disease. Periods of intermission may simulate malaria or may last days, weeks, or months. Patients may be hospitalized for weeks and get up and go back to their avocation only to come back with renewal of symptoms.

Pernicious anaemia is quite often diagnosed when the true trouble is subacute endocarditis, but the blood picture helps you to differentiate.

The evolution of endocarditis lenta can easily be mistaken during its first months for tuberculosis. It has the same insidious, irregular thermic curve, pronounced asthenia, profuse sweats, anaemia, anorexia and sometimes loss of weight.

Leukaemia and malaria are also to be considered from a differential standpoint, but the microscope here comes to your aid.

In a disease of this long duration, you do not expect to find a high leucocyte and differential count and often it does not show much of a change above normal, yet during acute exacerbations it may show a great increase, probably due to some intercurrent infection from another microorganism.

Libman claims the duration less than six weeks is called acute bacterial endocarditis while from six weeks to one year is called subacute, while over that time is called chronic endocarditis. I have seen several cases run a temperature for a year with clear brain, little loss of flesh or even gain in weight, and wonderful optimism like is manifested in tubercular infections.

It develops slowly progressive heart symptoms from an initial slight blowing sound or no clinical heart symptoms at all, to a very musical murmur, apparently involving many valves with palpable thrill, dilatation, accelerated and compressible pulse and increasing precordial and suprasternal pulsations until the whole precordial area visibly pulsates. Some cases do not produce any clinical symptoms of the valves at all.

The remarkable thing about these cases is the maintenance of the muscular integrity of the heart as shown by the ability of some of these cases to keep on with their work and the way the blood pressure sometimes holds up. I saw one case of influenzal endocarditis who kept up his work as a travelling man until the endocarditis was far advanced and the blood culture positive. One dentist I saw had been actively engaged in his profession until an embolic process quickly took him off. Sir Thomas Horder reports several soldiers on fully duty with this trouble and it is commonly considered that many cases of neuro-circulatory asthenia was in reality a bacterial endocarditis.

Positive blood cultures can be obtained in about 70 per cent of the cases. It may be that several attempts will have to be made before the organism is found in the blood. In one case of mine, it was only demonstrated after many attempts during a six months' period. Greatest success is obtained if one watches for local disturbances in vegetations which are shown by *chills* and sudden *rise of temperature* which occur at the time of more definite embolic phenomena. At which time one has the advantage of a shower of organisms in the blood stream and consequently the greater likelihood of a *growth*.

The age incidence is most likely between twenty and forty. The youngest I have ever seen is a child of two and one half years.

Geographical distribution is greater in colder countries, cities and people under great physical or mental strain and exposure. So great were the number of cases among returned British soldiers that they had a symposium on endocarditis in the British Medical Society in 1920.

Joseph Pratt in a talk at Atlanta last year pointed out the relative infrequency of the trouble in the South and West, probably due to the dry atmosphere lessened amount of rheumatism.

Libman in New York City seems to have seen and reported more than any one else and is quoted as one of our greatest authorities on this subject.

Summary (Murry).

1. The insidious onset.
2. A persistent and monotonous fever.
3. Valvulitis, symptoms mitral aortic and rarely tricuspid, starting with little or no evidence and gradually but slowly increasing in importance.
4. Enlargement of spleen.
5. Cross embolic phenomena. (Hemiplegia infarction of brain, spleen and kidneys mycotic aneurisms, etc.)
6. Minute embolic phenomena (petechral

hemorrhages and Osler's nodes.)

7. Nephritis of a peculiar type.

8. Positive blood culture.

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## THE TREND OF OBSTETRICS\*

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The question underlying this subject may seem to be, to paraphrase a well worn expression, "What is the matter with obstetrics?"

We have had Caesarean section, pituitrin, routine version, and lastly routine forceps and episiotomy and yet our maternal mortality is the same. This situation might aptly call forth the question, "Where do we go from here?" Or, in other words, what will be the next advancement in obstetrics for the shortening of the time lost by the accoucheur in attendance upon the parturient woman? For to the bystander, this feature may seem not the least important result of the above advances in obstetrics.

In analyzing the conditions underlying the much too high maternal mortality, to say nothing of maternal morbidity, which in all its degrees runs ten times as high as the mortality, the causes must be classified as (1) those lying with the public and (2) those lying with the profession.

As far as the causes lying with the public are concerned, the chief one seems to be that the poor folks have most of the babies. To paraphrase again, "The Lord must love poor babies, for he makes so many of them." For the real poor, there seems to be only one solution, namely liberal antepartum care and hos-

\* Chairman's Address; read before Section on Obstetrics and Pediatrics, Oklahoma State Medical Association Annual Meeting, Oklahoma City, May 13, 14, 15, 1924

pitalization by the State. Until our law makers and public purse string pullers realize that our child bearing women are worth as much as the live stock of the country, to say nothing of the necessary but expensive paved roads, we can expect no great diminution in the mortality of this class. In other words, there must be a general awakening of the public conscience, especially in this great new western country, where our development has been too rapid for the public health and welfare to keep pace with it, to the end that the health and individual welfare of our citizens, especially our mothers, may come first in the concern of the body politic. In other words the public slogan should be "health and happiness first, all other things follow." When this sentiment becomes paramount, and apparently not before, we shall have an United States Department of Health, ranking at least an equal in importance and influence with the departments of war, navy and other cabinet portfolios.

But there is another class, as large, if not larger, than the first, who, while not wealthy, can still afford adequate ante-partum care and proper hospitalization if the realization of the need of the same is properly sold to them. Here then lies a task for the medical profession, supported by the press, and propaganda by any and all the public serving and educating organizations that will help us. The great trouble with this class seems to be that "keeping up with the Joneses" refers more to Fords and radios than it does to adequate care for the ever decreasing numbers of pregnancies and labors. As an example of this, we recently confined a young primipara who was denied expected hospital care because her husband could not afford it; and yet, during the term of her pregnancy, he had traded in his roadster on a coupe, and had bought a dandy radio, either of which expenses would have more than paid for adequate hospital care of his wife and new born babe. I should say decreasing labors: for while I am not so sure of a decrease in the number of pregnancies, I am positive of the relative decrease of full term labors within the past few years. In other words, the spirit of the times is more favorable to the abortionist than to the obstetrician.

But when we have convinced this class that the best of care and hospital facilities are just as necessary in pregnancy and labor as they are in acute appendicitis, then we shall have bridged the one great chasm between us and our patients in this class. However, it is pleasant to contemplate that the public, at least in the cities, is being sold hospital care

in obstetrics more rapidly every year. The writer can well remember that in his student days and in his first general hospital service, which commenced just sixteen years ago this week, our hospital obstetric patients were practically limited to the wealthy women on one hand, and those from corrective institutions on the other, with an occasional major abnormality sent in for a Caesarean section or other spectacular delivery. But practically all the poor and middle class women were confined in their homes. The students gained their only obstetrics experience in the outpatient department, where single handed we combated ignorance and dirt. And in the light of present day knowledge, our mortality was remarkably low, due no doubt to the fact that we had never heard of pituitrin, routine version, or episiotomy, and to us Caesarean section was only an operation of last resort in the gravest cases of pelvic contraction.

But today the obstetric specialist confines practically all his patients in hospitals and many general practitioners in the cities deliver fifty percent of their cases in the maternities. And, as though giving us a mark at which to shoot, the city of Minneapolis now reports 65 per cent of all its births delivered in hospitals.

In reference to this question of hospitalization of obstetrics, I feel that the majority of the general hospitals of the country have not lived up to their responsibility in the encouraging of these patients to be delivered in hospitals. Instead of equipping special maternity pavilions or even wards, most general hospitals require obstetric patients to engage high priced private rooms and many of them indeed will not take such cases at all unless they can afford the added luxury of a special nurse. Under such conditions it is small wonder that many moderate homes keep, instead of the wolf, the stork from the door. I am sorry to say that in this city, where thanks to our medical school influence, hospital facilities are better than in most western cities of its class, only two of our general hospitals have modern maternity departments, as evidenced by separate delivery rooms, nurseries and beds for obstetrics only.

But the signs of the times tell me that a better day is dawning. As we once saw fifty percent of the major surgery done in the home, whereas it is now practically all done in hospitals, so I hope and really expect to live to see the day that all urban and most rural obstetrics is done in modern maternities.

And then every mother, blessed by God with her new born babe nestling at her breast will realize that "somebody cares."

Now, to briefly consider the conditions for

which the profession must accept responsibility: I trust I shall never be accused of belittling any advance made by my profession; but I cannot entirely repel the thought that it is possibly not insignificant that the four best advertised advances made in obstetrics in the twenty years I have been in medicine not only shorten the length of labor but incidentally (?) materially shorten the period of attendance of the obstetrician. I refer again to pituitrin, Caesarean section, routine version, and routine forceps with episiotomy.

As to pituitrin, we cannot feel as worried about the dangers in the use of this drug as we did a few years ago. A literature replete with tragedies from the abuse of this drug, together with the effect of persistent sound obstetric teaching in this regard, has finally brought the profession to a realization that in pituitrin we have a remedy that is most useful when properly indicated and administered and yet is always full of dangers and pitfalls.

And yet only three or four years ago an essayist appeared before this very body advocating the routine use of pituitrin because it conserved the valuable time of the practitioner. And for years, until the last year or two, this section was annually regaled with a debate between the opponents and proponents of the routine use of pituitrin, in which the proponents regularly held their own in numbers, if not in soundness of logic.

This argument always reminds us of the reference by that great pioneer in gynecology, Joseph Price, to the most dangerous man in medicine, namely, he "who applies forceps merely because he has reed birds for supper, or tickets to the opera." But even the manufacturers of this obstetric dynamite have realized the danger to their profits in the reaction from the abuse of this drug and have voluntarily reduced the ampule content one-half, and are advising the use of very small doses, at least until the patient's reaction to the same can be ascertained. Now the other measures mentioned also serve to increase the surgical and spectacular aspect of the case and apparently make the obstetric surgeon feel entitled to a larger fee. In other words, to call a spade a spade, I fear that there are cases in which the so called obstetrician charges extra for meddling and possibly bungling.

As far as the profession is concerned, there seems to be two classes of men chiefly responsible for our mortality. First, there are the general men who dislike obstetrics, but continue to practice it to eke out a living or else because they feel that they must take these cases in order to hold the family business. A

man is not apt to do well that which he does not like to do, and this instance is no exception. These men are frequently careless and indifferent, and perform the most slip shod deliveries with little or no aseptic equipment or technique: In fact, their slogan seems to be, as expressed to me not so long ago by an otherwise very good practitioner, "anything to get thru with the case." This type of man is a wolf in sheep's clothing, and may rest assured that his results will soon speak louder than words to the effect that he does not care for obstetrics, and the public will soon take him at his own word so expressed.

The other men, so dangerous to our mortality, are the general surgeons, still used as consultants in obstetrics in many communities, and whose panacea for all cases of dystocia is Caesarean section. Newell, of Boston, has found an alarming condition in the smaller cities around Boston, where this operation is done more or less routinely in dystocia by the general surgeons, and some of whose mortality is as high as fifty percent.

To obviate this condition, the real obstetrician must prepare himself by training and practice to perform well any surgical procedure that may arise in the course of a case of obstetrics. Unless an obstetrician has a large hospital service the opportunities for the surgical side of obstetrics are scarcely sufficient to keep him in good surgical practice. For this reason, it has long been our opinion that an obstetrician should also do operative gynecology. And conversely, as the gynecologist field is being steadily preempted by the general and the so called abdominal surgeon, if he shall hold his ground, he must prove his claim by taking care of all conditions affecting the female generative organs, which necessarily includes the practice of obstetrics.

As the obstetrician who can only handle normal or slightly aberrant cases is little more than a mid-wife, and the gynecologist who only operates in the female pelvis is a little less than an abdominal surgeon, the ideal obstetrician or gynecologist is that dual specialist, obstetrician, gynecologist.

This, then, as we study the trend of obstetrics is our interpretation of the hand writing on the wall: that the near future will see a definite merging of the two specialties, designated by one name or the other, or perhaps both. Let the specialist teach which ever branch he may, he must, in order to reach his highest efficiency, practice both.

In reference to the so called routine version, we do not feel that this subject should be dignified by a discussion of the same. But in passing we merely remark that while internal podalic version is a most useful re-

sort when indicated, its use as an elective routine method of delivery should never be countenanced. No matter how skillfully done this operation should constitute grounds for malpractice, when performed without definite indications.

And we carry little more brief for routine forceps and episiotomy, especially as practiced by the rank and file of the profession today. We feel that, in our enthusiasm to do an operation, namely, an episiotomy, we are apt to underestimate our ability to prevent lacerations by the time honored methods of complete anesthesia and manual expression of the fetal head. While the episiotomy is not at all difficult, the satisfactory repair of the same may be, and one should be sure of his light, equipment, assistance and lastly his asepsis and technique, before attempting the same. For these reasons this operation should, except in the rarest of cases, be limited to the hospital and then only under the most ideal conditions. We have seen several after results of apparently well performed episiotomies which were not at all flattering, but might easily have been due to improper after care, which is a point that must be borne in mind, rather than to the repair itself.

The speaker was more or less amused some time ago to hear a short term observation graduate of Potter and De Lee state, in defense of his labor shortening devices, that the modern girl demanded relief and was not content to go thru an old fashioned labor. This reminded me of the dialogue between the doctor and the modern mother who protested against castor oil for her baby with the words, "Oh! Doctor, castor oil is such an old fashioned remedy." His reply was, "Well, madam, are not babies old fashioned things?"

In conclusion, let me suggest that one of the things troubling obstetrics is that, like the Hebrews friend in the hospital, it may be suffering from too many improvements.

Finally, let me urge that in the practice of obstetrics, or any other branch of this sacred profession and trust, we be slow to take up with time-saving innovations, thoughtful and definite in our judgment, conscientiously thorough in our work, not seeking the mote in our brother's eye without removing the beam from our own, to the end that when all our labors are done we may reap that greatest of rewards by hearing the grateful words, "Well done thou good and faithful servant."

## BOOK REVIEWS

### THE HUMAN TESTIS

Its Gross Anatomy, Histology, Physiology, Pathology, With Particular Reference to its Endocrinology, Aberrations of Function and Correlation to Other Endocrines, As Well as the Treatment of Diseases of the Testes and Studies in Testicular Transplantation and the Effects of the Testicular Secretions on the Organism: By Max Thorek, M.D., Surgeon-in-Chief, American Hospital; Consulting Surgeon, Cook County Hospital, Chicago; President, International Congress of Comparative Pathology, Rome; 1924, Etc. Cloth, 308 illustrations, 548 pages. J. B. Lippincott Company, Philadelphia.

Aside from the thoroughness of cuts and illustrations on the gross anatomy, histology, pathology, etc., this volume offers nothing new. Exposition of experimental work, on fowls and animals is unusually good. As we are now, and have been for several years, mainly concerned with the questions involved in gland transplantation from animals (apes and goats), and the human to human, anything said on that score is of interest. The Author states with great accuracy the reports of Lydston, Lespinnasse, Voronoff, Steinach and others. The work is interesting to those seeking the truth. It is not given over to over-enthusiasm nor does it consider the general principles involved to be unworthy of further and careful experimental, laboratory and clinical work.

### DIABETES

A Hand-Book for Physicians and their Patients, by Philip Horowitz, M.D. Cloth, 34 illustrations. Two colored plates. 219 pages. Price \$2.00. Paul B. Hoeber, Publisher, 69 East 59th St., New York.

The first edition of this valuable work was of great help to both physician and intelligent patient. This edition has been almost entirely rewritten, with especial reference to insulin; methods of working out maintenance diets formulated, many new formulae added; Van Slyce's test for CO<sub>2</sub> combining power of plasma inserted and the Folin and Wu sugar test substituted for the Benedict-Lewis. It warns that while insulin gives more latitude as to diets, thorough knowledge of food values is more necessary than before.

### ABSTRACT DEPARTMENTS

*will appear again beginning with the July JOURNAL.*



DOCTOR EVERETT SAMUEL LAIN, PRESIDENT  
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Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
gested that wherever possible members of the State Association  
should patronize our advertisers in preference to others as a  
matter of fair reciprocity.

PRINTED BY OKLAHOMA PRINTING COMPANY, MUSKOGEE

### EDITORIAL

#### RETIREMENT OF DR. GEORGE H. SIMMONS

The American medical profession and our National Journal will shortly lose one of its master minds when Dr. Simmons, for twenty-five years editor of the Journal of the American Medical Association releases the helm to other hands. He voluntarily retires at the age of seventy-three after years of arduous, unappreciated service. Unappreciated from the fact that it is impossible for the rank and file to know the many problems this great editor and director faced and overcame. A banquet will be tendered him on the evening of June 9 at the Congress Hotel, Chi-

cago, on which occasion his portrait will be presented by a gathering of his personal and official friends, who have known him and his good work for many years. The committee in charge is composed of the leading medical authorities of the country.

That the American Medical Association owes its present modern position to the organizing genius and steadfastness of purpose on the part of Dr. Simmons is undisputed by those familiar with our past struggles. Sensing the power of cooperation years ago, he has so applied it that the Journal under his management is one of the greatest in the world, not only supplying authoritative information over the widest scope to thousands of physicians, but is now being issued in Spanish edition as well as Portuguese to the Brazilian profession. To fill further and more technical needs he brought about the publication of several other Journals dealing with the specialties. After years of service as Secretary-Editor, that office was divided, Dr. Simmons devoting his efforts to the editorship, but at all times keeping in close touch with all phases of medical activity. It is regrettable to have to note here, what probably is inevitable when the egotism and selfishness of man is considered, and that is the many unfair critics of this great man. In some cases the enmity was vicious and unreasonable beyond belief. Investigation of these cases discloses as a cause in most cases that the critic could not dictate to and force his views upon Dr. Simmons. The smallness of some of the cases is understood when one knows that they arose from the necessary and proper rejection of papers offered for publication. This, however, is one of the penalties incurred by every man in that position. Another great objection raised was that he was a graduate of an Homeopathic school, the critic invariably forgetting to add that he was also a graduate of Rush Medical College. But he was so wonderfully poised, calm and judicious in his decisions and acts that no amount of work or strain confused him. His investigations and studies of everything affecting medicine, his observations and judgment upon economic conditions touching us fitted him so well for the task of separating chaff from the wheat, truth from falsity that to know him, receive his advice, was indeed a privilege, in the writer's opinion, not to be equalled at any other source. This ability to detect the spurious and fraudulent naturally made him the storm center of many controversies. His position on acceptance of advertising alone has proved of incalculable value, not alone to the physician, but the

general public. Not once has he ever had to recede from his decisions in that respect. He retires with the respect and admiration of those who know him best.

### THE OKLAHOMA CITY MEETING

This, our thirty-second annual meeting, goes into the past with the enviable reputation of excelling in every line of work, all past meetings. Due to team work the attendance was approximately one hundred higher than any other meeting. More than five hundred and sixty physicians registered. Each of the three mornings offered very wide and diversified types of high-class clinics, this work carried on at the University, St. Anthony's, Wesley, Oklahoma General and Rolater Hospitals. The general meeting brought out a house filled to overflowing, while the two meetings of the evening of May 14, followed by dancing was attended by hundreds of physicians, their friends and allied persons interested in our work.

The commercial exhibits were conveniently arranged about the registration tables and all exhibitors were satisfied with their reception.

Several functions of a social and business nature attracted visitors. Among them being the meeting of county health officers held at the capitol upon invitation of State Commissioner Puckett. Several luncheons were given at the Oklahoma Club and dinners of the Phi Beta Pi and Reserve Officers Association were well attended. The several social functions tendered visiting ladies were keenly appreciated and secured for the ladies of Oklahoma City unstinted praise.

The General meeting, held Wednesday evening offered the most extensive program ever yet presented for our visitors. Dr. Wm. H. Bailey, president of the Oklahoma County Society presented the speakers. After invocation by Reverend Ernest C. Mobley and address of welcome by Judge J. S. Ross, Dr. C. A. Johnson, Wilson, our most brilliant orator responded in his most happy vein. Dr. Ralph V. Smith, retiring president, delivered a short address. Dr. E. S. Lain, president delivered his president's address, which contained much of the past history of Oklahoma medicine. A pleasing feature of the occasion was the appearance on the stage of several members who participated in the organization of our society. Among these were Drs. W. W. Jolly, E. O. Barker, J. A. Hatchett, and Jesse Overstreet. Dr. M. F. Engman, St. Louis, guest of the Association, presented an illustrated lecture on "Humeral Eruptions."

### Editorial Notes—Personal and General

DR. and MRS. W. R. BARRY, Alex, visited in Arkansas last month, where Mrs. Barry will spend the summer.

DR. and MRS. CLIFFORD K. LOGAN, Hominy, announce the arrival of a daughter, Mary Martha, on April 24th.

DR. and MRS. J. M. STOOKSBURY'S daughter, Mallie, was married May 17, to Mr. Melvin Miller, at Sand Springs.

DR. CHAS. A. BRAKE, Medford, has removed to Norman, where he has taken a position at the Oklahoma Central Hospital for Insane.

DR. C. E. SEXTON, Stillwater, was recently initiated into La Societe des 40 Hommes at 8 Chevaux, Voiture Locale No. 488, the super-service organization of the American Legion.

PAYNE COUNTY medicos and their ladies enjoyed a delightful evening at Drumright May 1, as the guests of the Creek County doctors and their wives. The Payne County Medical Society wishes at this time to thank the Creek County "brothers of the trade" for the aforesaid hospitality.

DR. J. B. MURPHY, Stillwater, who died May 19, was attended at his funeral on May 21st, by the following Payne County Medical Society members: Dr. Thos. A. Love, Ripley; Dr. C. E. Sexton, Dr. L. A. Cleverdon and Dr. James H. Cash, Stillwater; and Dr. J. E. Adams, Dr. E. M. Harris, Dr. W. N. Davidson, Dr. P. M. Richardson, Dr. John A. Martin and Dr. J. Walter Hough, Cushing.

MORNINGSIDE HOSPITAL, Tulsa, has just completed a twenty-one room addition, with all modern furniture, which gives it a capacity of eighty beds. A number of the rooms have private bath attached. A complete and up-to-date laboratory outfit has been installed, including a bedside unit for fracture work. A Hawley table has been installed for the adjustment of fractures. The obstetrical department is completed with the latest and best equipment for delivery purposes. The laboratory will enable to make frozen sections while the patient is on the table, which is a very necessary procedure in cases of questionable growths. This hospital has equipment, second to none in the state, and only two are its superiors and these only in size. The staff is composed of the leading men in the profession in Tulsa.

OKLAHOMA UNIVERSITY Medical School enrollment for 1924-25 is filled, according to Dr. L. A. Turley, assistant dean. Seventy-five names now are being considered from which 50 will be permitted to enter the freshman class next September, Doctor Turley said. More than 75 others have been refused entrance and no further applications for enrollment will be received. This is the third year the medical school has had to close enrollment and turn away students on account of inadequate facilities to accommodate the number desiring admission, the assistant dean said. Only Oklahoma students are considered and all these cannot be permitted to enter. When the new medical school building, now being constructed, is completed, the medical school will have facilities for a large increase in the number of annual entrants, he added. This building will be completed about December 1, 1924.

TRANSACTIONS OF THE THIRTY-SECOND ANNUAL MEETING, OKLAHOMA STATE MEDICAL ASSOCIATION, OKLAHOMA CITY, MAY 13-15, 1924.

HOUSE OF DELEGATES

May 13—2:00 P. M. Dr. Ralph V. Smith, President, presiding.

Minutes of the annual meeting of May 1923 approved as previously published. Annual report of the Secretary-Treasurer-Editor was submitted and report of the auditing committee of the Council, Drs. P. P. Nesbitt and J. T. Slover. (See annual report).

A committee on credentials: Drs. Walter Bradford, Shawnee, and W. H. Williamson, Sulphur, was appointed.

On presentation of matters pertaining to the State Board of Medical Examiners by Dr. J. B. Clark, Coalgate, the matter was referred to a committee on resolutions consisting of Drs. J. B. Clark, Coalgate, J. H. Scott, Shawnee and C. W. Heitzman, Muskogee.

Amendment to the By-Laws was offered by Dr. Wm. H. Bailey, reading as follows:

Chapter 9, Section 8 to read as follows:

When a member in good standing in a component county in this State shall move into another county in the state, he shall, within twelve months from the date of location in such county, transfer his membership, without additional cost, to the county society in the county of which he is resident, and it shall be obligatory upon the part of the society in the county to which he removes to accept him in good standing."

A committee on revision of the constitution and by-laws was named by the President, as follows: Drs. G. A. Wall, Tulsa, Chairman; Wm. H. Bailey, Oklahoma City; C. A. Thompson, Muskogee.

Dr. G. A. Wall offered an amendment to Section 9, Chapter 5, by-laws inserting the words "and graduate" after the word "registered."

The House adjourned until 8:30 A. M., May 14.

C. A. THOMPSON,

Secretary-Treasurer-Editor.

The House of Delegates, May 14—8:30 A. M.

Dr. Ralph V. Smith, the President, presiding:

The credentials committee reported and the election of officers was ordered.

Dr. P. P. Nesbitt, Muskogee, was elected president-elect.

Drs. G. S. Baxter, Shawnee, J. S. Fulton, Atoka and W. H. Livermore, Chickasha, were elected first, second and third vice-presidents, respectively.

Dr. A. S. Risser, Blackwell, was reelected councillor for the first district; Dr. L. S. Willour, McAlester, was reelected for the sixth district. Dr. W. Albert Cook, Tulsa, was reelected Delegate to the A. M. A. to serve for the years 1925 and 1926.

Tulsa was selected as the meeting place for 1925.

Dr. J. H. Caton, Fraternal delegate from the Texas Medical Association delivered an address to the House.

Reports from the committees on Medical education, Neurology and Tuberculosis were read by Chairmen of the committees. (See reports).

A report from the committee on Resolutions referring to the State Board of Medical Examiners, after discussion, was tabled. Dr. E. S. Lain, President-elect, made a brief address to the House.

Dr. Roy W. Dunlap, Tulsa, moved adoption of a vote of thanks to the medical profession, Chamber of Commerce, Hospitals, the nursing profession and medical student body for their splendid efforts in entertaining and caring for the comfort of the Association; Carried.

Dr. A. S. Risser, Blackwell, offered a resolution, which carried, commending the State Board of Medical Examiners for their efforts, under difficult and perplexing conditions, seeking eradication of illegal practitioners.

Amendments to the By-Laws as offered at the previous meetings were adopted.

THE COUNCIL: May 13—9:00 A. M.

Present. Drs. R. V. Smith, President, G. A. Wall, L. S. Willour, J. T. Slover, Walter Bradford, P. P. Nesbitt and C. A. Thompson.

The financial report of the Secretary-Treasurer-Editor was made and certified to by the auditor, Mr. Hugh Lewis, Muskogee, approved by the auditing committee, Drs. P. P. Nesbitt, Muskogee and J. T. Slover, Sulphur, after which it was approved by the Council. (See reports).

A Credentials committee for the House was appointed, the president naming Drs. Walter Bradford, Shawnee and W. H. Williamson, Sulphur.

Dr. G. A. Wall reported his findings in the matter of Dr. B. F. Collins, Claremore, and the Rogers County Society, which report was approved by the Council and the Secretary instructed to advise those concerned. After discussion of the matter it was ordered that not more than \$100.00 was to be expended

in any single case of alleged malpractice hereafter brought against any member, and that such sum should only be expended within the limitations now governing medical defense. The Council adjourned.

The Council, May 14 1:30 P. M.

President E. S. Lain, presiding. This meeting was held for the purpose of outlining policies for the coming year. It was especially agreed that the members would take more personal interest in the county societies and visit and stimulate them in every way. It was decided to hold another meeting after sufficient time has elapsed for consideration of the matters considered. The Council adjourned.

C. A. THOMPSON,  
Secretary-Treasurer-Editor.

## REPORTS

Report of the Secretary-Treasurer-Editor, Thirty-Second Annual Meeting, Oklahoma City, May 13-15, 1924.

To the Council, House of Delegates and Members:

Gentlemen: Conforming with the Constitution and By-Laws, I herewith submit report of our work since our last meeting from May 1, 1923 to April 30, 1924, inclusive. Detailed report of every receipt and expenditure has been submitted to the auditing committee of the Council, after examination and report of the auditor and officers of the bank holding our assets, with their proper certification as required by the bonding company.

The JOURNAL and our ADVERTISING:

We have exceeded receipts over those of the previous year by a few hundred dollars, a matter of congratulation considering the state of the country financially, and especially conditions prevailing in the Southwest. But, a state of satisfied inertia is one of retrogression in all things. Every rule of intelligence indicates that cooperation from our members will bring us due return from reliable firms offering the necessities used by physicians. We should, without exception, patronize our advertisers when all things are equal. In the past year their support alone exceeded all JOURNAL printing costs as well as costs of an unusual amount of miscellaneous printing by several hundred dollars. Certainly we should show them our appreciation in every manner and on every occasion. We expect the coming year to show increase, but with your cooperation that result will be certain.

## DEATHS in our MEMBERSHIP:

Dr. R. I. Allen, Bristow; Dr. G. W. Amer-son, Milo; Dr. George A. Boyle, Enid; Dr. M. W. Buchanan, Watonga; Dr. J. M. Chapman, Lawton; Dr. C. F. Cottrel, Guthrie; Dr. M. A. Kelso, Enid; Dr. I. A. Lee, Erick.

Dr. J. F. McArthur, Wilburton; Dr. L. E. McCurry, Tahlequah; Dr. G. A. Morrison, Poteau; Dr. W. B. Pigg, Okmulgee; Dr. J. H. Proffitt, Yale; Dr. Geo. Strickland, Claremore; Dr. L. H. Winborn, Tuttle; Dr. J. M. Workman, Woodward.

## MEDICAL DEFENSE:

Despite the fact that this feature has been in operation as one of the privileges of our membership for nearly 10 years, it remains the most troublesome problem of the many confronting us. Though its terms and limitations are clearly stated and restated at intervals, it is persistently misunderstood and made the basis of extended argument and criticism by applicants demanding its aid without regard to its limitations on part of the applicant member. This, and other surrounding facts brought to light during the course of final disposition of the matter has provoked most serious opinion from competent observers that our membership, as a whole, are imposed upon and that the feature should possibly be either entirely abandoned or strictly limited as to the amount expended in every case.

Instancing this matter, it is to be noted that members adequately protected by one or more indemnity policies covering the matter in action, insist upon duplication of expense and effort on the part of the Association. And, in such cases wholly disregard the advice of your attorneys and follow that of their indemnity companies especially in the event of adverse judgment in lower courts, when by all means the matter should be contested to the highest court.

In more than one instance the defended member, already having involved us in high costs, lapses his membership ignoring the customary warnings mailed him, and after being stricken from the rolls insists upon reinstatement with all its attendant costs.

Great difficulty also arises in those cases where members bring suit for bills of trivial amount and are answered by counter-claims for alleged malpractice. Occasionally these arise through no possible fault of the member, but, as a rule, the matter is one of honest dissatisfaction on the part of the patient, or lack of tact and display of fair spirit on both sides. Simple justice to our membership as well as common sense points to the conclusion that most of such cases might, and

should be, settled without involving us, admitting at the outset that the member may be entirely in the right, but concession and compromise is indicated by the facts of the case, giving due regard to the possible good-faith of the dissatisfied patient. Generous and broad-minded regard of claims of dissatisfied patients should always be accorded, for it cannot be forgotten that his attitude may be based upon what he considers the best of grounds. In such cases, assuming that honesty prevails on both sides, some settlement should be reached without resort to useless litigation.

Once more we must note that great discretion, charity and the Golden Rule should be the cardinal principles applied by the physician informally called upon as listener to the complaints from the patient of our brothers. No hint or opinion is proper in such case, which would not be made in the presence of all concerned. If this is remembered our troubles will be reduced to the minimum.

#### FINANCIAL STATEMENT

Oklahoma State Medical Association  
Dr. C. A. Thompson, Secy.-Treas.  
Muskogee, Okla., May 1, 1924.  
Receipts

May 1, 1923, Balance on hand in bank.....	\$ 3,014.55
Advertising and Subscriptions.....	6,743.60
County Secretaries .....	6,507.25
Interest, (Liberty Bond).....	21.25
Medical Defense Fund, Loan.....	3,520.00
Refund, Expense, (Engraving).....	31.83
Total.....	\$ 19,838.48

#### Expenditures

Printing: JOURNAL.....	\$5,928.97
Miscellaneous .....	413.25
Secretary's Salary.....	2,341.10
Due Secretary, 1923 Salary.....	129.87
Clerical Help, Business Manager.....	1,645.00
Extra Help .....	130.40
Advance Salary, Business Manager.....	125.00
Office Rent .....	303.25
Stamps and Postage.....	307.00
Telephone, Telegraph, Express and Drayage .....	79.46
Office Supplies .....	396.54
Legislative and Delegate's Expense.....	1,339.10
Press Clippings .....	75.00
Subscriptions .....	21.35
Refunds, Donations, etc.....	51.85
Treasurer's Bond and Audit of Books.....	55.00
Payment of Loan, (Medical Defense Fund) .....	3,500.00
Transfer to Medical Defense Fund.....	500.00
Total.....	\$ 17,342.14
May 1, 1924, Balance, Cash on Hand.....	2,496.34
Total.....	\$ 19,838.48
Balance, May 1, 1924, Cash on hand .....	\$2,496.34
Liberty Bond (2d 4½%).....	500.00
Total Cash Assets .....	\$ 2,996.34
Balance, Cash on hand.....	\$2,496.34
Check No. 1458 outstanding .....	6.00
Cash in Bank, May 1, 1924.....	\$ 2,502.34

#### FINANCIAL STATEMENT

##### Medical Defense Fund

Dr. C. A. Thompson, Sec.-Treas.  
Muskogee, Okla., May 1, 1924.

#### Receipts

May 1, 1923, Balance on Hand.....	\$ 432.38
Time Deposit Cash.....	1,500.00
Oklahoma State Medical Association.....	500.00
Loan Paid, Oklahoma State Medical Association .....	3,500.00
Interest on Time Deposits.....	63.25
Total.....	\$ 5,995.63

#### Expenditures

Attorney's Fees and Legal Expense.....	\$ 924.55
Oklahoma State Medical Association, Loan .....	1,500.00
Time Deposits (Commercial National Bank) .....	3,500.00
Total.....	\$ 5,924.55
May 1, 1924, Balance on Hand in Bank.....	71.08
Total.....	\$ 5,995.63
May 1, 1924, Cash on Hand in Bank.....	\$ 71.08
Time Deposits, Commercial National Bank.....	4,150.00
Total Cash Assets, May 1, 1924 Medical Defense Fund.....	\$ 4,221.08
Total Cash Asset, Oklahoma State Medical Association.....	\$ 2,996.34
Medical Defense Fund.....	4,221.08
Grand Total Assets.....	\$ 7,217.42

(Signed) H. A. Lewis, Auditor.

Muskogee, Okla., May 8, 1924.

May 7, 1924.

#### TO WHOM IT MAY CONCERN:

This is to certify that there was to the credit of the Oklahoma State Medical Association on checking account with this bank, at the close of business April 30, 1924, according to our records, the sum of \$2502.34.

This bank was holding for said Association on that date, for safe keeping, one \$500.00 Liberty Loan bond.

Yours very truly,

(Signed) E. D. Sweeney,  
Vice-President.

Commercial National Bank,  
Muskogee, Oklahoma.

May 7, 1924.

#### TO WHOM IT MAY CONCERN:

This is to certify that there was to the credit of the Medical Defense Fund on checking account with this bank, at the close of business April 30, 1924, according to our records, the sum of \$71.08; and on time deposit the sum of \$4150.00, evidenced by three certificates of deposit as follows:

No. 15,451 dated 2-14-24.....	\$2000.00
No. 15,452 dated 2-14-24.....	1500.00

No. 15,595 dated 4-21-24..... 650.00

Yours very truly,

(Signed) E. D. Sweeney,

Vice-President.

Commercial National Bank,  
Muskogee, Oklahoma.

Respectfully submitted,

C. A. THOMPSON,

Secy.-Treas.-Editor.

## REPORT OF THE EDUCATION COMMITTEE

In America, medical education has made remarkable strides in the last two decades. The number of medical schools now is about half what it was twenty years ago. Most of the weak schools have been eliminated. The privately owned medical college is a thing of the past; practically all schools are now affiliated with some university and are either supported by state appropriations or endowments. Adequate equipment and clinical facilities have been provided, standards raised and some degree of standardization reached. The fundamental branches are taught by full time specially trained men; but in most schools the clinical branches are still taught by busy practitioners. A few schools are experimenting with full time clinical teachers, but at the present time funds are inadequate for putting this plan into operation in the average school.

All Class "A" schools now require a minimum of two years of college work for admission, and a course of four years of nine months each for graduation in medicine. Some schools require a fifth year of hospital work for a degree.

In our own state the only medical school, the University of Oklahoma School of Medicine, has made rapid progress. It now operates a clinical hospital of nearly 300 beds and an outpatient clinic of approximately 100 ambulatory patients a day. The departments on the University Campus at Norman are sorely in need of space for laboratories and lecture rooms, a condition that will be partially cared for by the building now under construction. There is great need for space and facilities for research in both the fundamental and practical branches. Our state institution cannot keep pace in development with those of the surrounding states as Colorado, Texas, Arkansas, unless the next legislature makes adequate provisions for buildings and equipment. The greatest need at this time is the erection of a medical school building at Oklahoma City, and it is the recommendation of your committee that this

association go on record as favoring such a program.

Oklahoma City, May 14, 1924.

Wann Langston, M.D.

A. B. Chase, M. D.

Lea A. Riely, M. D.

## COMMITTEE ON TUBERCULOSIS, MAY 14, 1924

The work of the National Tuberculosis Association has helped to attain the result that within the past twenty years, since the beginning of the organized tuberculosis campaign the death rate from the disease has been reduced from two hundred two to ninety-five deaths per one hundred thousand. The National Association has improved the organizations in the states already established and now covers every state and all the large centers of population in the United States, approximately 1,400 in all. The expenditure through these Associations is \$25,000,000.00, in education and organization. This has resulted in appropriations from public funds amounting to \$150,000,000.00 for the establishment of tuberculosis agencies with a total annual maintenance budget of over \$30,000,000.00.

The public health nursing idea, has developed into one of the most significant factors in disease prevention.

Child health, through the medium of the Modern Health Crusade, has increased, until approximately eight million boys and girls have been enrolled. So much for the National Tuberculosis health work.

Now, to come to our own state. The Oklahoma Public Health Association, the most active factor in tuberculosis work in this state, is advancing its work as rapidly as its financial condition will permit. It is greatly handicapped, all the time, by the lack of funds. It is organizing committees, in new counties, constantly; is placing trained public health nurses in those counties where funds will permit; is sending trained health nurses into rural schools and has examined 34,826 school children, during this past year. Believing that the child is the proper place to begin the health work, if we can prevent illness in these children and can build them up into strong boys and girls, even where no illness is present, we will go a long way toward building healthy adult men and women, thereby greatly lessening the incidence of tuberculosis. The methods of reaching the tuberculosis problem are not necessarily direct. We have, first of all, and our biggest proposition, the education of the masses, to consider. For that purpose we send out leaf-

lets, books, literature of all sorts, moving picture film, have trained speakers, have our nurses and last but not least, have our Annual Christmas Seal Sale, which is more of an advertising educational factor, than it is a money raising idea. In the second place, we have, in order to prevent tuberculosis, which so often comes of a run down physical condition, due to any cause, to prevent the incidence of other diseases. Therefore, we go into the school and we go into the homes and try to prevent such diseases as whooping cough, measles, typhoid fever and other debilitating diseases, thereby decidedly decreasing the tendency of tuberculosis.

The Modern Health Crusade, which has been placed in so many schools throughout the State, has been proved to be a wonderful health agency. If you could have seen the recent results of the Poster Contest, by the school children of the state, you would have been astonished to see what can be done along educational health lines. I feel that we have, during the past year, made a very marked advance toward the prevention of tuberculosis.

One more matter is that the original plans for the three State Sanatoria, have not been completely carried out, in so far as it was the original intention, to have them show a far greater capacity than they have, at present. Now, they are filled and have a waiting list. It would seem, that our legislative committee should be requested to secure the necessary funds to enlarge the capacity of these Sanatoria, so that most of our cases may be cared for, which is not the case at present.

I feel that our Association should not encourage the formation of new organizations, such as has recently been formed, at Enid, with the help of some of our members but support and aid the established proven agencies which are entirely capable and have the requisite experience, as duplication of effort is to be deplored, causing only confusion of effort and needless additional expense. I, therefore, recommend the withdrawal of our members from such and urge their cooperation with the older institutions.

Tom Lowry, M.D.

H. T. McCarley, M.D.

Horace T. Price, M.D.

## TO MY MOTHER

'Tis not enough to wear a rose,  
For one who sleeps in sweet repose;  
Who suffered all the pains of birth,  
That we her sons might live on earth.

But we the sons who wear the rose,  
In memory of this one reposed:  
Should in gladness praise her name,  
And of her blessed memory sing.

Mother was the crowning glory,  
Told to us in that sweet old story;  
Of our Gods creating power,  
Gave to us this mother of ours.

That thru all the sins and shame,  
Never will forsake her name;  
But will at the throne of grace,  
Ask that we be given a place.

Sons of woman and daughters too,  
We should strive this long life thru;  
To reflect her love so true;  
That we may meet her in heaven too.

And there in glory in sweet embrace,  
Make glad her soul, she saved the race:  
And be glad and make her the same,  
That we thru life did honor her name.

Written May 11, 1924 by W. L. Stephenson, M.D.,  
Henryetta, Oklahoma.

## CHILD NEEDS NAP IN MIDDLE OF DAY

"Baby just won't take his nap any more. I can't make him."

At all mothers who make this or equivalent statements Dr. John Lovett Morse, child specialist, is indignant. Says he in *Hygeia*, popular health journal, for May:

"Nothing exasperates me more than to have a large, able-bodied woman tell me that she cannot make her child stay in bed in the daytime. Every child can be made to rest, although of course he cannot be made to sleep."

The midday rest period should be kept up until the demands of school life make it impossible, Dr. Morse declares in his article on "The Over-trained Child." Children of the pre-school age should always be put to bed early; at best by six o'clock but always by seven.

## DON'T TAKE CHILD ON LONG MOTOR TRIPS

Young children should never be taken for long rides in automobiles, unless it is a necessity, says Dr. John Lovett Morse, well-known children's specialist of Boston, in *Hygeia* for May.

Long rides are very fatiguing to young children, he declares. The rush of the air, the constant change of scene and the excitement do them much harm; especially is this the case with nervous children.

The same holds true of long walks, in his opinion. Many parents, especially fathers, insist on taking the family out for a walk on Sunday afternoon. The children's legs are short and when the father walks at an ordinary gait, they must run to keep up.

# ROSTER

## OKLAHOMA STATE MEDICAL ASSOCIATION

### 1924

#### ADAIR COUNTY

John L Bean.....	Westville
Dorsey P Chambers.....	Stilwell
Robert M Church.....	Stilwell
Benjamin F Collins.....	Claremore
Isaac Walton Rogers.....	Watts
R L Sellars.....	Westville
Thomas S Williams.....	Stilwell

#### ALFALFA COUNTY

William J Cavanaugh.....	Amorita
Z J Clark.....	Cherokee
M T Evans.....	Aline
J M Gaume.....	Byron
C O Gingles.....	Carmen
L T Lancaster.....	Cherokee
H A Lile.....	Cherokee
E C Ludlum.....	Carmen
J W Lynes.....	Byron
T A Rhodes.....	Cherokee
James Stevenson.....	Cherokee

#### ATOKA COUNTY

Thomas H Briggs.....	Atoka
J W Crews.....	Stringtown
Henry Avner Ellis.....	Daisy
Joseph S Fulton.....	Atoka
Charles C Gardner.....	Atoka
Charles Clarence Rose.....	Atoka
James Robert Stiewig.....	Tushka

#### BECKHAM COUNTY

J M Denby.....	Carter
A A Huntley.....	Elk City
J A Jester.....	Elk City
E S Kilpatrick.....	Elk City
Robert C McCreery.....	Erick
W B McDaniel.....	Hammon
W D Oliver.....	Erick
T D Palmer.....	Elk City
G W Phillips.....	Sayre
M Shadid.....	Elk City
H K Speed.....	Sayre
G H Stagner.....	Erick
J E Standifer.....	Elk City
Dewitt Stone.....	Sayre
W C Threlkeld.....	Sweetwater
V C Tisdal.....	Elk City
J D Warford.....	Erick
O N Windle.....	Sayre

#### BLAINE COUNTY

J S Barnett.....	Hitchcock
J W Browning.....	Geary
W F Griffin.....	Watonga
V R Hamble.....	Okeene
George M Holcombe.....	Okeene
H E Huston.....	Watonga
H M Krebs.....	Eagle City
J B Leisure.....	Watonga
L H Murdoch.....	Okeene
A F Padberg.....	Canton
D F Stough.....	Geary

#### BRYAN COUNTY

J R Allen.....	Caddo
D Armstrong.....	Durant
J L Austin.....	Durant

W G Austin.....	Mead
J A Bates.....	Kemp
P L Cain.....	Albany
Roy L Cochran.....	Caddo
James T Colwick.....	Durant
C D Dale.....	Caddo
H B Fuston.....	Bokchito
R H Grassham.....	Caddo
C J Green.....	Durant
A S Hagood.....	Durant
John A Haynie.....	Durant
F M Jackman.....	Mead
J R Keller.....	Calera
D C McCalib.....	Utica
W H McCarley.....	Colbert
H B McKinney.....	Durant
B H Moore.....	Durant
J A Morrow.....	Durant
H P Pope.....	Bennington
S W Rains.....	Platter
H C Ricks.....	Durant
G M Rushing.....	Durant
R E Sawyer.....	Durant
James L Shuler.....	Durant
C F Taliaferro.....	Bennington
C E Wann.....	Albany
A J Wells.....	Calera

#### CADDO COUNTY

P H Anderson.....	Anadarko
W C Barton, U S Indian Office.....	Washington D C
Jesse Bird 2532 1-2 S Robinson St.....	Oklahoma City
Samuel Blair.....	Apache
B D Brown.....	Apache
J R Bryan.....	Cogar
T J Butler.....	Mauldin, Ark.
George C Campbell.....	Anadarko
J H Cantrell.....	Carnegie
Ira R Clark.....	Carnegie
George B Coker.....	Cyril
F Dinkler.....	Fort Cobb
W L Dixon.....	Cement
Edward W Downs.....	Hinton
M H Edens.....	Anadarko
W T Hawn.....	Binger
J J Henke.....	Hydro
A F Hobbs.....	Hinton
Charles R Hume.....	Anadarko
E L Inman.....	Apache
R E Johnston.....	Bridgeport
W W Kerley.....	Anadarko
C W Lane.....	Okanogen, Wash
P L McClure.....	Fort Cobb
C B McMillen.....	Gracemont
C N Meador.....	Anadarko
P B Myers.....	El Reno
J W Padberg.....	Carnegie
W B Putnam.....	Carnegie
R D Rector.....	Anadarko
F W Rogers.....	Carnegie
N E Ruhl.....	Hydro
P L Sanders.....	Bremerton, Wash
C A Smith.....	Hinton
A H Taylor.....	Anadarko
H Van Wade.....	Cement
A J Willard.....	Cyril
R W Williams.....	Anadarko
S E Williams.....	Hydro

## CANADIAN COUNTY

T M Aderhold.....	El Reno
A H Bierman.....	Okarche
H C Brown.....	El Reno
W B Catto.....	El Reno
H A Dever.....	El Reno
J A Hatchett, Liberty Bldg.....	Oklahoma City
P F Herod.....	El Reno
Thomas Lane.....	El Reno
W J Muzzy.....	El Reno
Charles M Pearce.....	Calumet
J T Phelps.....	El Reno
D P Richardson.....	Union City
Thomas B Richardson.....	Piedmont
J T Riley.....	El Reno
S S Sanger.....	Yukon
G W Taylor.....	El Reno
J E Tomkins.....	Yukon
L G Wolf.....	Okarche

## CARTER COUNTY

M S Alexander.....	Ardmore
George W Amerson*.....	Milo
E R Barker.....	Healdton
J T Barnwell.....	Graham
J C Best.....	Ardmore
F W Boadway.....	Ardmore
J H Cameron.....	Healdton
A G Cowles.....	Ardmore
J L Cox.....	Ardmore
Seymour DePorte.....	Ardmore
Thomas W Dowdy.....	Wilson
A Y Easterwood.....	Ardmore
O J Gee.....	Ardmore
L D Gillespie.....	Berwyn
Walter Hardy.....	Ardmore
W G Hathaway.....	Lone Grove
Robert H Henry.....	Ardmore
H A Higgins.....	Springer
C J T Hines.....	Wirt
T J Jackson.....	Marsden
C A Johnson.....	Wilson
G E Johnson.....	Ardmore
W M Johnson.....	Ardmore
Waldo B Lain.....	Ardmore
G L Langworthy.....	Wilson
L A McComb.....	Wilson
J R McCracken.....	Wilson
J C McNees.....	Ardmore
Y M Miller.....	Wirt
J R Pollock.....	Ardmore
W H Rogers.....	Wilson
W C Sain.....	Ardmore
Dow Taylor.....	Woodford
P A Taylor.....	Healdton
F P Von Keller.....	Ardmore
S W Wilson.....	Ardmore

## CHEROKEE COUNTY

J S Allison.....	Tahlequah
Swarts Baines.....	Tahlequah
A A Baird.....	Tahlequah
W G Blake.....	Tahlequah
T J Bond.....	Tahlequah
P H Medearis.....	Tahlequah
Joseph M Thompson.....	Tahlequah

## CHOCTAW COUNTY

Robert L Gee.....	Hugo
Thomas Henderson.....	Fort Towson
Edgar A Johnson.....	Hugo
J D Moore.....	Hugo
R J Shull.....	Hugo
Hal H White.....	Hugo
Reed Wolf.....	Hugo

## CLEVELAND COUNTY

C S Bobo.....	Norman
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\*Deceased.

T M Boyd.....	Brownsville, Texas
G M Clifton.....	Norman
B H Cooley.....	Norman
J L Day.....	Norman
Gayfree Ellison.....	Norman
J J Gable.....	Norman
C W Grady.....	Moore
D W Griffin.....	Norman
J B Lambert.....	Lexington
R D Lowther.....	Norman
W T Mayfield.....	Norman
J P Miller.....	Norman
R E Thacker.....	Lexington
G W Wiley.....	Norman
J M Williams.....	Norman

## COAL COUNTY

Frank Bates.....	Coalgate
J B Clark.....	Coalgate
R D Cody.....	Centrahoma
L A Conner.....	Coalgate
H G Goben.....	Lehigh
J J Hipes.....	Coalgate
W B Wallace.....	Coalgate
H M Wheeler.....	Coalgate

## COMANCHE COUNTY

J T Antony.....	Lawton
C W Baird.....	Medicine Park
G S Barber.....	Lawton
Jackson Broshears.....	Lawton
J J Chapman*.....	Lawton
E B Dunlap.....	Lawton
P G Dunlap.....	Lawton
L T Gooch.....	Lawton
Fred W Hammond.....	Lawton
J R Hood.....	Indianapolis
C P Hues.....	Lawton
Charles W Joyce.....	Fletcher
George E Kerr.....	Chattanooga
L C Knee.....	Lawton
Thomas R Lutner.....	Lawton
J W Malcolm.....	Lawton
C W Martin.....	Elgin
W J Mason.....	Lawton
W B Mead.....	Lawton
E Brent Mitchell.....	Lawton
J Allen Perisho.....	Cache
Alexander H Stewart.....	Lawton

## COTTON COUNTY

Charles W Alexander.....	Temple
Lloyd B Foster.....	Walters
Albert B Holstead.....	Temple
Charles F House.....	Hastings

## CRAIG COUNTY

F M Adams.....	Vinita
Louis Bagby.....	Vinita
C P Bell.....	Welch
W M Campbell.....	Vinita
N L Cornwell.....	Meridian
J W Craig.....	Vinita
F G Gastineau.....	Vinita
J H Haley.....	Vinita
P L Hays.....	Vinita
A W Herron.....	Vinita
W R Marks.....	Vinita
Robert L Mitchell U S Veterans Hospital.....	Muskogee

C S Neer.....	Vinita
W M Phillips State Soldiers Home.....	Lafayette Ind
E A Pickens.....	Grove
L J Pierce.....	Vinita
D B Stough.....	Vinita
Stephen A Todd.....	Centralia
Charles F Walker.....	Grove

## CREEK COUNTY

W G Bisbee.....	Bristow
C D Blachly.....	Drumright
Lucile S Blachly.....	Drumright
O C Coppedge.....	Bristow
O S Coppedge.....	Depew
G C Croston.....	Sapulpa
Melvin Fry.....	Wewoka
H S Garland.....	Sapulpa
J A Gregoire.....	Drumright
H R Haas.....	Sapulpa
J E Hollis.....	Bristow
J W Hoover.....	Sapulpa
Leon Izgur Childrens Hospital	Randalls Island
.....	New York N Y
Ellis Jones.....	Sapulpa
C Edgar Kahle.....	Drumright
E W King.....	Bristow
J B Lampton.....	Sapulpa
R E Leatherock.....	Drumright
P K Lewis.....	Sapulpa
W P Longmire.....	Sapulpa
A E Martin.....	Bristow
Claude G Martin.....	Bristow
W A Martin.....	Sapulpa
J M Mattenlee.....	Sapulpa
C L McCallum.....	Sapulpa
C R McDonald.....	Mannford
Charles H Morris.....	Slick
W J Neal.....	Drumright
J T Price.....	Shamrock
C B Reese.....	Sapulpa
E W Reynolds.....	Bristow
S W Reynolds.....	Drumright
W P Robinson.....	Sapulpa
Paul Sanger.....	Drumright
Charles T Schrader.....	Bristow
B C L Schwab.....	Sapulpa
W H Sisler.....	Bristow
W F Snorgrass.....	Bristow
O W Starr.....	Drumright
Roy M Sweeney.....	Sapulpa
Z G Taylor.....	Mounds
J W Wells.....	Bristow
George H Wetzell.....	Sapulpa
J Clay Williams.....	Bristow

## CUSTER COUNTY

W I Basinger.....	Butler
C L Brundage.....	Thomas
E E Darnell.....	Clinton
J T Frizzell.....	Clinton
J Matt Gordon.....	Weatherford
K D Gossom.....	Custer
A J Jeter.....	Clinton
Ellis Lamb.....	Clinton
C H McBurney.....	Clinton
McLain Rogers.....	Clinton
J J Williams.....	Weatherford
O W Wright.....	Putnam

## DEWEY COUNTY

Frank W Allen.....	Leedey
W E Seba.....	Leedey

## ELLIS COUNTY

R L Edmonds.....	Shattuck
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## GARFIELD COUNTY

J W Baker.....	Enid
Paul B Champlin.....	Enid
Lee W Cotton.....	Enid
Julian Feild.....	Enid
John W Francisco.....	Enid
G G Harris.....	Lahoma
George O Hartman.....	Enid

J H Hays.....	Enid
T B Hinson.....	Enid
Frederick A Hudson.....	Enid
William L Kendall.....	Enid
William G Kiebler.....	Enid
J E Mahoney.....	Enid
E Margo.....	Covington
S N Mayberry.....	Enid
S H McEvoy.....	Enid
A L McInnis.....	Enid
W B Newell.....	Enid
A S Piper.....	Enid
W H Rhodes.....	Enid
D D Roberts.....	Enid
F P Robinson.....	Hillsdale
Percy A Smith.....	Enid
J R Swank.....	Enid
John R Walker.....	Enid
J M Watson.....	Enid
R H Wigner.....	Enid
A E Wilkins.....	Covington
Eugene J Wolff.....	Waukomis

## GARVIN COUNTY

T C Brannum.....	Pauls Valley
James R Callaway.....	Pauls Valley
John R Callaway.....	Pauls Valley
Lewis Gaddy.....	Stratford
W P Greening.....	Pauls Valley
T F Gross.....	Lindsay
G L Johnson.....	Pauls Valley
E H Lain.....	Lindsay
John K Lindsey.....	Elmore City
N H Lindsey.....	Pauls Valley
H P Markham.....	Pauls Valley
C P Mitchell.....	Chickasha
E E Norvell.....	Wynnewood
C M Pratt.....	Lindsay
M E Robberson.....	Wynnewood
W E Settle.....	Graham
J B Shannon 105 W 13 st.....	Oklahoma City
James W Stevens.....	Pauls Valley
C L Sullivan.....	Elmore City
Ernest Sullivan Tradesmens Bldg	Oklahoma City
J W Tucker.....	Lindsay
H P Wilson.....	Wynnewood

## GRADY COUNTY

J C Ambrister.....	Chickasha
H C Antle.....	Chickasha
W R Barry.....	Alex
Walter J Baze.....	Chickasha
Martha Bledsoe.....	Chickasha
LeRoy Bonnell.....	Chickasha
U C Boon.....	Chickasha
R C Caldwell.....	Bradley
H A Calvert.....	Chickasha
W H Cook.....	Chickasha
C P Cox.....	Ninnekah
D S Downey.....	Chickasha
L E Emanuel.....	Chickasha
G R Gerard.....	Chickasha
P J Hampton.....	Rush Springs
W W Henegar.....	Ninnekah
A E Hennings.....	Tuttle
R R Hume.....	Minco
A B Leeds.....	Chickasha
Jesse Little.....	Minco
W H Livermore.....	Chickasha
S O Marrs.....	Chickasha
H C Masters.....	Minco
G M McVey.....	Verden
A W Nunnery.....	Chickasha
C E Putnam.....	Tuttle
J F Renegar.....	Tuttle
A C White.....	Chickasha

## GRANT COUNTY

Charles A Brake, Okla. Central Hosp. for Insane	Norman
G T Drennan	Pond Creek
A L Hamilton	Manchester
I V Hardy	Medford
E T Keeler	Lamont
S A Lively	Wakita
J F Martin	Deer Creek
B W Saffold	Gibbon
J Marshall Tucker	Nash

## GREER COUNTY

C W Austin	Mangum
G F Border	Mangum
W O Dodson	Willow
H W Finley	Vinson
J B Hollis	Mangum
O R Jeter	Brinkman
J B Lansden	Granite
J T Lowe	Mangum
Frank H McGregor	Mangum
J S Meredith	Duke
Ney Neel	Mangum
T J Nunnery	Granite
L E Pearson	Mangum
E M Poer	Mangum
C C Shaw	Brinkman
T L Willis	Granite

## HARMON COUNTY

Samuel W Hopkins	Hollis
William G Husband	Hollis
J S McFaddin	Hollis
Roy L Pendergraft	Hollis
William T Ray	Gould
J W Scarborough	Darlington

## HASKELL COUNTY

John Davis	Stigler
E Johnson	Kinta
O H Jones	Keota
R E Jones	Stigler
R F Terrell	Stigler
T B Turner	Stigler
M Van Matre	Keota
N K Williams	McCurtain

## HUGHES COUNTY

J A Bentley	Stewart
W B Bentley	Calvin
A M Butts	Holdenville
G M Combast	Lamar
A L Davenport	Holdenville
G W Diggs	Wetumka
T B Felix	Holdenville
L J George	Stewart
C A Hicks	Wetumka
Henry A Howell	Holdenville
L M Lett	Dustin
John W Lowe	Holdenville
D Y McCary	Holdenville
P E Mitchell	Wetumka
J F Musser	Calvin
C E Parker	Dustin
J D Scott	Holdenville
Charles S Wallace	Dustin

## JACKSON COUNTY

Edward A Abernethy	Altus
R F Brown	Altus
E S Crowe	Olustee
R H Fox	Altus
E M Mabry	Altus
L H McConnell	Altus
W P Rudell	Altus
W E Sanderson	Altus
C G Spears	Altus
J S Stults	Olustee
H R Taylor	Eldorado

## JEFFERSON COUNTY

W T Androskowski	Ryan
W M Browning	Waurika
D B Collins	Waurika
J I Derr	Waurika
F M Edwards	Ringling
M L Hutchison	Ryan
A R Lewis 11th & Harvey	Oklahoma City
C M Maupin	Waurika
J M Stephens	Hastings
L B Sutherland	Wilson
L L Wade	Ryan
J W Watson	Ryan

## JOHNSTON COUNTY

Guy Clark	Milburn
J T Looney	Tishomingo

## KAY COUNTY

C W Arrendell	Ponca City
C J Barker	Kaw City
Charles L Blanks	Ponca City
G B Browne	Ponca City
Howard S Browne	Ponca City
P A Edwards	Nardin
R B Gibson	Ponca City
H O Gowey	Newkirk
A R Hancock	Tonkawa
A R Havens	Blackwell
J C Hawkins	Blackwell
A L Hazen	Newkirk
J A Jones	Tonkawa
D C Kalloch	Braman
W M Leslie	Blackwell
W A Lockwood	Ponca City
Allen Lowery	Blackwell
William N McClurkin	Ponca City
S S McCullough	Braman
Thomas McElroy	Ponca City
D W Miller	Blackwell
George H Neimann	Ponca City
C E Northcutt	Ponca City
Arthur S Nuckols	Ponca City
E J Orvis	Blackwell
A S R'sser	Blackwell
William A T Robertson	Ponca City
Herbert C Schenck	Newkirk
H M Stricklin	Tonkawa
A C Syfert	Blackwell
L C Vance	Ponca City
E E Waggoner	Tonkawa
J C Wagner	Ponca City
I D Walker	Blackwell
John W Werner	Newkirk
C T White	Tonkawa
J T E Widney	Kaw City
J C Woll	Tonkawa
V A Wood	Blackwell
C L Zimmerman	Ponca City

## KINGFISHER COUNTY

E R Cavett	Loyal
A Dixon	Hennessey
Charles W Fisk	Kingfisher
C O Gose	Hennessey
A O Meridith	Kingfisher
J A Overstreet	Kingfisher
John W Pendleton	Kingfisher
Newton Rector	Hennessey
Frank Scott	Kingfisher
Benjamin I Townsend	Hennessey
Ira H Vincent	Dover

## KIOWA COUNTY

J D Ballard	Mountain View
J M Bonham	Hobart
J R Bryce	Snyder

M E Chambers.....	Gotebo
A T Dobson.....	Hobart
Melvin Gray.....	Mountain View
J T Hamilton.....	Snyder
A H Hathaway.....	Mountain View
J A Land.....	Lone Wolf
H C Lloyd.....	Hobart
Frank F Martin.....	Roosevelt
William McIlwain.....	Lone Wolf
E P Miles.....	Hobart
J H Moore.....	Hobart
J A Muller.....	Snyder
J H Ritter.....	Roosevelt
F E Walker.....	Lone Wolf
Barton H Watkins.....	Gotebo
J D Winter.....	Hobart

## LATIMER COUNTY

E L Evins.....	Wilburton
E B Hamilton.....	Wilburton
T L Henry.....	Wilburton
C F Loy.....	Wilburton
J F McArthur*.....	Wilburton
C R Morrison.....	Red Oak
R L Rich.....	Red Oak

## LEFLORE COUNTY

J B Beckett.....	Spiro
S D Bevell.....	Poteau
C B Billingsly.....	Cowlington
James M Bolger.....	Poteau
George R Booth.....	Leflore
E A Campbell.....	Heavener
N W Campbell U S Veterans Bureau	Oklahoma City
E L Collins.....	Panama
S C Dean.....	Howe
E N Fair.....	Heavener
W C Gilliam.....	Spiro
I T Harbour.....	Cowlington
Harrell Hardy.....	Poteau
J J Hardy.....	Poteau
A G Hunt.....	Bokoshe
W F Lunsford.....	Poteau
R W Minor.....	Williams
A M Mixon.....	Spiro
G A Morrison*.....	Poteau
John L Plumlee.....	Poteau
R M Sheppard.....	Talihina
Edgar E Shippey.....	Wister
J B Wear.....	Poteau
B D Woodson.....	Poteau
Earl M Woodson.....	Poteau

## LINCOLN COUNTY

J W Adams.....	Chandler
Joseph E Anderson.....	Agra
W D Baird.....	Stroud
A C Byars.....	Kendrick
F B Erwin.....	Wellston
P F Erwin.....	Wellston
J O Glenn.....	Stroud
J M Hancock.....	Chandler
R H Hannah.....	Prague
C O Lively.....	Ralston
A M Marshall.....	Chandler
C M Morgan.....	Chandler
Levi Murray.....	Wellston
U E Nickell.....	Davenport
W A Pendergraft.....	Carney

## LOGAN COUNTY

C B Barker.....	Guthrie
E O Barker.....	Guthrie
Pauline Barker.....	Guthrie
J O Butler.....	Crescent
A G T Childers.....	Mulhall
Dan Gray.....	Guthrie

\*Deceased

L A Hahn.....	Guthrie
C B Hill.....	Guthrie
J L Houseworth 6548 1-2 Hollywood Blvd	Los Angeles Calif
H W Larkin.....	Guthrie
J L Melvin.....	Guthrie
W C Miller.....	Guthrie
C S Petty.....	Guthrie
L H Ritzhaupt.....	Guthrie
J E Souter.....	Guthrie
David Stevens.....	Guthrie
F E Trigg.....	Guthrie
A A West.....	Guthrie

## LOVE COUNTY

D Autry.....	Marietta
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## MARSHALL COUNTY

T A Blaylock.....	Madill
William H Ford.....	Kingston
J I Gaston.....	Madill
W D Haynie.....	Kingston
J L Holland.....	Madill
E F Lewis.....	Kingston
J H Logan.....	Lebanon
H E Rapolee.....	Madill
P F Robinson.....	Madill
O E Welborn.....	Kingston

## MAYES COUNTY

J L Adams.....	Pryor
W C Bryant.....	Choteau
J E Hollingsworth.....	Strang
John D Leonard.....	Strang
J L Mitchell.....	Pryor
B L Morrow.....	Salina
E L Pierce.....	Locust Grove
Carl Puckett.....	Oklahoma City
Ivadel Rogers.....	Pryor
S C Rutherford.....	Locust Grove
William J Whitaker.....	Pryor
L C White.....	Adair

## MAJOR COUNTY

John V Anderson.....	Fairview
B F Johnson.....	Fairview
Elsie L Specht.....	Fairview

## McCLAIN COUNTY

J E Cochran.....	Byars
O O Dawson.....	Wayne
I N Kolb.....	Blanchard
W C McCurdy.....	Purcell
W B Slover.....	Blanchard
J W West.....	Purcell

## McCURTAIN COUNTY

N L Barker.....	Broken Bow
Eugene Baylis.....	Idabel
A W Clarkson.....	Valliant
R C Farrier.....	Idabel
A S Graydon.....	Idabel
C R Huckabay.....	Valliant
E A Kelleam.....	Garvin
William B McCaskill.....	Idabel
C T McDonald.....	Broken Bow
Benjamin F Moreland.....	Shults
J T Moreland.....	Idabel
W A Moreland.....	Idabel
R H Sherrill.....	Broken Bow
J M Thompson.....	Broken Bow
E B Walker.....	Smithville
R D Williams.....	Idabel
N D Woods.....	Millerton

## McINTOSH COUNTY

Dyton Bennett.....	Texanna
G W Graves.....	Hitchita
L I Jacobs.....	Vivian

N P Lee.....	Checotah
D E Little.....	Eufaula
J H McColloch.....	Checotah
A L Mobley.....	Eufaula
A J Pope.....	Hanna
B F Rushing.....	Hanna
J N Shaunty.....	Eufaula
F L Smith.....	Fame
W A Tolleson.....	Eufaula
J C Watkins.....	Harlingen Texas
G W West.....	Eufaula

## MURRAY COUNTY

Paul V Annadown.....	Sulphur
Howson C Bailey.....	Sulphur
J E Bailey.....	Sulphur
C E Bates.....	Sulphur
A P Brown.....	Davis
W B Goddard.....	Sulphur
J C Luster.....	Davis
A V Ponder.....	Sulphur
W H Powell.....	Sulphur
J H Simmons.....	Sulphur
G W Slover.....	Sulphur
J T Slover.....	Sulphur
J T Wharton.....	Sulphur
J E White.....	Sulphur
W H Williamson.....	Sulphur

## MUSKOGEE COUNTY

K L Allen.....	Haskell
A E Carder.....	Coweta
S G Hamm.....	Haskell
R T Harrod.....	Keefeton
W R Joblin.....	Porter
John E Lee.....	Haskell
Milton Morrow.....	Great Bend Kans
W E Pearce.....	Boynton
J H Plunkett.....	Wagoner
T T Shakelford.....	Haskell
J W Sosbee.....	Gore
B O Young.....	Balko

## Muskogee Oklahoma

H T Ballantine.....	811 Surety Bldg
W D Berry.....	510 Barnes Bldg
J L Blakemore.....	Barnes Bldg
S N Chatterjee.....	Exchange Bldg
C E DeGroot.....	Equity Bldg
R N Donnell.....	215 Raymond Bldg
K M Dwight.....	808 No C st
A N Earnest.....	229 Exchange Bldg
Albert W Everly.....	Equity Bldg
Finis W Ewing.....	Surety Bldg
F B Fite.....	Barnes Bldg
William P Fite.....	Barnes Bldg
W E Floyd.....	233 Equity Bldg
S J Fryer.....	Surety Bldg
C M Fullenwider.....	Barnes Bldg
A W Harr's.....	408 Surety Bldg
James G Harris.....	Exchange Bldg
Charles W Heitzman.....	Barnes Bldg
R N Holcombe.....	Surety Bldg
J I Hollingsworth.....	Manhattan Bldg
Emma S Keith.....	D & Dayton sts
F S King.....	Surety Bldg
O C Klass.....	310 Surety Bldg
S E Mitchell U S Veterans Hosp	Honor Heights
Charles P Murphy.....	U S Veterans Hospital Honor Heights
Shade D Neely.....	309 Barnes Bldg
P P Nesbitt.....	Surety Bldg
J T Nichols.....	236 Equity Bldg
I B Oldham.....	Surety Bldg
J G Rafter.....	228 Metropolitan Bldg
John Reynolds.....	Masonic Bldg
C V Rice.....	Barnes Bldg
H C Rogers.....	301 Manhattan Bldg

H A Scott.....	413 Exchange Bldg
G W Stewart.....	Equity Bldg
A L Stocks.....	Barnes Bldg
C A Thompson.....	508 Barnes Bldg
M K Thompson.....	Surety Bldg
W T Tilly.....	708 Barnes Bldg
James S Vittum.....	709 Barnes Bldg
F L Walton.....	301 Surety Bldg
Floyd E Watterfield.....	Exchange Bldg
Charles E White.....	Muskogee
J Hutchings White.....	Surety Bldg
Fred J Wilkiemeyer.....	705 Barnes Bldg

## NOBLE COUNTY

Lambertus Kuntz.....	Perry
Harry McQuown.....	Red Rock
Benjamin A Owen.....	Perry
T F Renfrow.....	Billings

## NOWATA COUNTY

J E Brooksh're.....	Alhambra Sq Tulsa
E F Collins.....	Nowata
John R Collins.....	Nowata
D M Lawson.....	Nowata
William Narn.....	Alluwe
S P Roberts.....	Alluwe
M B Scott.....	Delaware
J P Sudderth.....	Nowata
J G Waters.....	Lenapah

## OKFUSKEE COUNTY

Allen C Adams.....	Weleetka
C M Bloss.....	Okemah
C C Bombarger.....	Paden
A M Chambers.....	Weleetka
W H Davis.....	Castle
J C Dovell.....	Paden
N P Ealy.....	Castle
F E Hilsmyer.....	Weleetka
W P Jenkins.....	Bearden
J A Kennedy.....	Okemah
R Keyes.....	Okemah
A C Lucas.....	Castle
H A May.....	Okemah
L A Nye.....	Okemah
J M Pemberton.....	Okemah
J C Pitchford.....	Shamrock
J R Preston.....	Weleetka
T R Preston.....	Weleetka
J S Rollins.....	Paden
L J Spickard.....	Okemah
A J Stephenson.....	Okemah
H W Yeats.....	Okemah

## OKLAHOMA COUNTY

T A Boyd.....	Weatherford
W E Dicken.....	247 E White Oak Monrovia Calif
Thomas H Flesher.....	Edmond
K Haas.....	Harrah
Joseph B Hix.....	Altus
O E Howell.....	Oktaha
R W Johnson.....	Mustang
S N Stone.....	Edmond

## Oklahoma City Oklahoma

J M Alford.....	Colcord Bldg
E P Allen.....	Liberty Bldg
Leila E Andrews.....	Colcord Bldg
William H Bailey.....	American Bldg
Ray M Balyeat.....	1st Natl Bldg
Charles E Barker.....	1st Natl Bldg
E T Barker.....	Stock Yds Nat Bldg
C N Berry.....	1st Natl Bldg
James G Binkley.....	133 1-2 W "C" Ave
A L Blesh.....	Patterson Bldg
Nathan Boggs.....	1st Natl Bldg
Floyd Bolend.....	American Bldg
Rex Bolend.....	1st Natl Bldg

H C Bradley.....	132 1-2 W Main st	E F Milligan.....	1941 W 17 st
T A Buchanan.....	American Bldg	Ellis Moore.....	Shops Bldg
L H Buxton.....	341 Pine St, Long Beach, Calif	J L Moorman.....	1st Natl Bldg
Albert Cates.....	Liberty Bldg	John Z Mraz.....	Patterson Bldg
J J Caviness.....	Liberty Bldg	R L Murdoch.....	Liberty Bldg
A B Chase.....	Colcord Bldg	E R Musick.....	1st Natl Bldg
H H Cloudman.....	Security Bldg	Ralph E Myers.....	St Anthony's Hosp
Cyril E Clymer.....	Liberty Bldg	M H Newman.....	Colcord Bldg
A J Coley.....	Patterson Bldg	L A Newton.....	Colcord Bldg
John P Cowman.....	American Bldg	N R Nowlin.....	Colcord Bldg
Paul H Crawford.....	American Bldg	D D Paulus.....	Patterson Bldg
B A Credille.....	Capitol Hill	Grider Penick.....	Colcord Bldg
James Culbertson.....	Mercantile Bldg	J R Phelan.....	Security Bldg
S R Cunningham.....	American Bldg	A S Phelps.....	1st Natl Bldg
A E Davenport.....	Cotton Bldg	John S Pine.....	Shops Bldg
Edward F Davis.....	American Bldg	J M Postelle.....	947 W 13 st
C R Day.....	1st Natl Bldg	Carroll M Pounders.....	Liberty Bldg
F A DeMand.....	Colcord Bldg	John A Reck.....	Colcord Bldg
Walter H Dersch.....	Shops Bldg	Horace Reed.....	1st Natl Bldg
W E Dixon.....	1st Natl Bldg	Lea A Riely.....	American Bldg
R O Early.....	Shops Bldg	John W Riley.....	119 W 5 st
E G Earnheart.....	Liberty Bldg	John A Roddy.....	116 W 5 st
R T Edwards.....	1st Natl Bldg	M M Roland.....	Patterson Bldg
J B Eskridge.....	Liberty Bldg	J B Rolater.....	Shops Bldg
E S Ferguson.....	1st Natl Bldg	F E Rosenberger.....	Security Bldg
C J Fishman.....	132 W 4 st	W W Rucks.....	Patterson Bldg
W A Fowler.....	101 E 7 st	L M Sackett.....	American Bldg
S E Frierson.....	1st Natl Bldg	W T Salmon.....	1st Natl Bldg
Fred F Fulton.....	American Bldg	A L Salomon.....	American Bldg
George Fulton.....	American Bldg	A J Sands.....	American Bldg
G H Gillen.....	Colcord Bldg	F M Sanger.....	Cotton Ex Bldg
Austin L Guthrie.....	American Bldg	Winnie M Sanger.....	Cotton Ex Bldg
Clark H Hall.....	1st Natl Bldg	H V L Sapper.....	Baum Bldg
J E Harbison.....	Colcord Bldg	R M Shaw.....	Security Bldg
J S Hartford.....	1st Natl Bldg	Fred C Sheets.....	Tradesmens Bldg
Paul E Haskett.....	1st Natl Bldg	Millington Smith.....	Colcord Bldg
B A Hayes.....	Terminal Bldg	L J Starry.....	1st Natl Bldg
John E Heatley.....	Liberty Bldg	Marvin E Stout.....	Patterson Bldg
J W Henry.....	Oil Ex Bldg	S Ernest Strader.....	Liberty Bldg
Fred B Hicks.....	American Bldg	S P Strother.....	Patterson Bldg
G W Hinchee.....	1415 W 34 st	C B Sullivan.....	Patterson Bldg
A C Hirshfield.....	American Bldg	Elijah S Sullivan.....	Colcord Bldg
J R Holliday.....	American Bldg	George R Tabor.....	American Bldg
R M Howard.....	1st Natl Bldg	C B Taylor.....	1st Natl Bldg
C A Howell.....	1st Natl Bldg	W M Taylor.....	1st Natl Bldg
B R Hunter.....	Shops Bldg	H Coulter Todd.....	Colcord Bldg
W J Jolly.....	Liberty Bldg	Cary W Townsend.....	1st Natl Bldg
E Lee Jones.....	616 Colcord Bldg	E L Underwood.....	1st Natl Bldg
John F Kelly.....	American Bldg	Guy B Van Sandt.....	1st Natl Bldg
Stratton E Kernodle.....	119 W 5 st	Frank R Viereggs.....	Colcord Bldg
John F Kuhn.....	1st Natl Bldg	Curt von Wedel.....	312 Colcord Bldg
W A Lackey.....	Liberty Bldg	Theodore G Wails.....	1st Natl Bldg
Everett S Lain.....	Patterson Bldg	W J Wallace.....	Shops Bldg
George A LaMotte.....	Colcord Bldg	J C Warmack.....	Tradesmens Bldg
William Langsford.....	1st Natl Bldg	Marshall W Weir.....	Colcord Bldg
Wann Langston.....	University Hosp	Eva Wells.....	Liberty Bldg
N E Lawson.....	Colcord Bldg	W W Wells.....	Liberty Bldg
Clarence E Lee.....	Patterson Bldg	A K West.....	Terminal Bldg
Elizabeth Lehmer.....	132 W 4 st	W K West.....	Terminal Bldg
LeRoy Long.....	Colcord Bldg	L M Westfall.....	American Bldg
LeRoy D Long Jr.....	Colcord Bldg	Arthur W White.....	Shops Bldg
Ross D Long.....	Liberty Bldg	Arthur A Will.....	Shops Bldg
T R Longmire.....	322 1-2 N Bway	H M Williams.....	Liberty Bldg
R E Looney.....	1st Natl Bldg	J J Willingham.....	Stock Yds Bk Bldg
R S Love.....	Liberty Bldg	Ennis C Wilson.....	305 Shops Bldg
Dick Lowry.....	American Bldg	Kenneth J Wilson.....	Liberty Bldg
Tom Lowry.....	American Bldg	A D Young.....	1st Natl Bldg
R S MacCabe.....	1st Natl Bldg	A M Young.....	Colcord Bldg
J C Macdonald.....	Patterson Bldg	OKMULGEE COUNTY	
J T Martin.....	Liberty Bldg	Lin Alexander.....	Severs Bldg Okmulgee
J H Maxwell.....	1st Natl Bldg	R M Alexander.....	Bryant
Earl D McBride.....	1st Natl Bldg	J E Bercaw.....	Okmulgee Clinic Okmulgee
D D McHenry.....	Colcord Bldg	I W Bollinger.....	Henryetta
J R McLaughlin.....	223 W "C" ave	H D Boswell.....	Henryetta
J F Messenbaugh.....	Colcord Bldg	Harry E Breese.....	Henryetta
W H Miles.....	Security Bldg	W W Brooks.....	Henryetta

M D Carnell.....Commerce Bldg Okmulgee  
 A W Coleman.....Dewar  
 W M Cott.....Commerce Bldg Okmulgee  
 R J Crabill.....Pharoah  
 A H Culp.....Beggs  
 J G Edwards.....Commerce Bldg Okmulgee  
 Forrest S Etter.....Beggs  
 James B Ferguson.....Severs Bldg Okmulgee  
 M B Glismann

.....Mercy Hospital Arkansas City Kans  
 O O Hammond.....Woolworth Bldg Okmulgee  
 T A Hartgraves.....Commerce Bldg Okmulgee  
 A R Holmes.....Henryetta  
 F A Howell.....Trent Hamilton Bldg Okmulgee  
 W S Hudson.....Okmulgee  
 Albert G Hughey.....Dewar  
 G A Kilpatrick.....Henryetta  
 J O Lowe.....Okmulgee Clinic Okmulgee  
 Thomas J Lynch.....Okmulgee Clinic Okmulgee  
 J C Matheney.....Commerce Bldg Okmulgee  
 G Y McKinney.....Henryetta  
 J A Milroy.....Commerce Bldg Okmulgee  
 J L Miner.....Beggs  
 C M Ming.....Commerce Bldg Okmulgee  
 W C Mitchener.....Okmulgee Clinic Okmulgee  
 H H Monroe.....Lindsay  
 R Mooney.....Henryetta  
 J H Neal.....Beggs  
 F L Nelson.....Severs Bldg Okmulgee  
 J P Nelson.....Schulter  
 J H Powell.....Kusa  
 H L Rains.....Commerce Bldg Okmulgee  
 B W Ralston.....Miami  
 D M Randel.....Okmulgee Bldg Okmulgee  
 Harvey Randel.....Okmulgee Bldg Okmulgee  
 J C Rembert.....Commerce Bldg Okmulgee  
 John L Riley.....Henryetta  
 I W Robertson.....Henryetta  
 J C Robinson.....Henryetta  
 E D Rodda.....Commerce Bldg Okmulgee  
 F E Sadler.....Henryetta  
 W C Sanderson.....Henryetta  
 Thomas H Shelton.....McBrayer Bldg Okmulgee  
 N N Simpson.....Henryetta  
 W W Stark.....Parkinson Bldg Okmulgee  
 L B Torrance.....Hamilton Bldg Okmulgee  
 W C Vernon.....Commerce Bldg Okmulgee  
 J O Walls.....Morris  
 V Wallace.....Morris  
 F S Watson.....Commerce Bldg Okmulgee  
 W S Watson.....Commerce Bldg Okmulgee  
 R L Westover.....Rebold Bldg Okmulgee  
 C C Whittle.....Henryetta  
 L B Windham.....Okmulgee Clinic Okmulgee

## OSAGE COUNTY

E T Alexander.....Barnsdall  
 Robert J Barrett.....Pawhuska  
 T J Colley.....Hominy  
 C H Day.....Pawhuska  
 T R First.....Bigheart  
 James J Fraley.....Hominy  
 Thomas P Goven.....Pawhuska  
 O R Gregg.....Pawhuska  
 C H Guild.....Apperson  
 M D Henley.....Osage  
 E N Lipe.....Fairfax  
 C K Logan.....Hominy  
 H B McFarland.....Hominy  
 I C Morris.....Shidler  
 Q B Neale.....Pawhuska  
 D A Shoun.....Fairfax  
 J G Shoun.....Fairfax  
 Benjamin Skinner.....Pawhuska  
 A J Smith.....Pawhuska  
 G E Stanbro.....Pawhuska  
 B F Sullivan.....Bigheart

H L Summers.....Marion Ill  
 G I Walker.....Hominy  
 Roscoe Walker.....Pawhuska  
 J T Williams.....Webb City  
 Leonard C Williams.....Pawhuska  
 E K Witcher.....Pawhuska  
 Dinonis Worten.....Pawhuska

## OTTAWA COUNTY

E A Aisenstadt.....Picher  
 W H Black.....Picher  
 J O Bradshaw.....Welch  
 R F Cannon.....Miami  
 J W Clark.....Commerce  
 George W Colvert.....Miami  
 D L Connell.....Picher  
 A M Cooter.....Miami  
 M M DeArman.....Miami  
 G A DeTar.....Miami  
 T J Dodson.....Picher  
 W M Dolan.....Picher  
 J B Hampton.....Commerce  
 R H Harper.....Afton  
 J C Jacobs.....Miami  
 J M Lanning.....Picher  
 E A Leisure.....Afton  
 J F Leslie.....Bernice  
 J B Lightfoot.....Miami  
 E D Mabry.....Hockerville  
 Charles McCollum.....Quapaw  
 C A McLelland.....Miami  
 G P McNaughton.....Miami  
 H K Miller.....Fairland  
 G Pinnell.....Miami  
 W A Sibley.....Cardin  
 Ira Smith.....Commerce  
 William B Smith.....Miami  
 J H L Staples.....Bluejacket  
 G W Taylor.....Cardin  
 L W Troutt.....Afton  
 G O Webb.....Cardin  
 M P Willis.....Commerce  
 F L Wormington.....Miami

## PAWNEE COUNTY

C W Ballaine.....Cleveland  
 C A Beeler.....Maramec  
 C E Beitman.....Skedee  
 J R Fleming.....Keystone  
 D J Herrington.....Terlton  
 G H Phillips.....Mt Pleasant Mich  
 J A Roberts.....Cleveland  
 E T Robinson.....Cleveland

## PAYNE COUNTY

James E Adams.....Cushing  
 C W Bates.....Quay  
 C H Beach.....Glencoe  
 J V Blair.....DeNoya  
 I A Briggs.....Stillwater  
 J H Cash.....Stillwater  
 L A Cleverdon.....Stillwater  
 W H Davidson.....Cushing  
 Benjamin Davis.....Cushing  
 E M Harris.....Cushing  
 R W Holbrook.....Perkins  
 J Walter Hough.....Cushing  
 W B Hudson.....Yale  
 Thomas A Love.....Ripley  
 H C Manning.....Cushing  
 John A Martin.....Cushing  
 W C Mitchell.....Yale  
 J B Murphy\*.....Stillwater  
 H M Prentiss.....Yale  
 P M Richardson.....Cushing  
 C E Sexton.....Stillwater

\*Deceased.

C D Simmons.....Stillwater  
 Ralph E Weller.....Electra Texas  
 L R Wilhite.....Perkins

## PITTSBURG COUNTY

E N Allen.....McAlester  
 V H Barton.....McAlester  
 J F Baum.....McAlester  
 J B Bright.....Kiowa  
 R L Browning.....Hartshorne  
 A D Bunn.....Savanna  
 H N Bussey.....Pittsburg  
 A E Carlock.....Hartshorne  
 T S Chapman.....McAlester  
 W A Daniel.....No McAlester  
 J E Davis.....McAlester  
 Joe Dorrough.....Indianola  
 J W Echols.....McAlester  
 P Gardner.....Haileyville  
 L E Gee.....Savanna  
 W C Graves.....McAlester  
 A Griffith.....McAlester  
 J O Grubbs.....No McAlester  
 W P Hailey.....Haileyville  
 Charles T Harris.....Kiowa  
 J M Harris.....Kiowa  
 Ellen Hedrick.....Mansfield Ark  
 W K Hudson.....Hartshorne  
 J C Johnson.....McAlester  
 G A Kilpatrick.....McAlester  
 L C Kuyrkendall.....McAlester  
 W P Lewallen.....Canadian  
 T H McCarley.....McAlester  
 C A McMeheh.....McAlester  
 F A Miller.....Hartshorne  
 J A Munn.....McAlester  
 R A Munn.....Kiowa  
 T T Norris.....Krebs  
 R K Pemberton.....McAlester  
 J F Park.....McAlester  
 W C Ramsay.....Quinton  
 O W Rice.....McAlester  
 W W Sames.....Hartshorne  
 J C Schlicht.....No McAlester  
 H D Shankle.....Hartshorne  
 Graham Street.....McAlester  
 F L Watson.....McAlester  
 J A Welch.....McAlester  
 L S Willour.....McAlester  
 McClellan Wilson.....McAlester

## PONTOTOC COUNTY

N B Breckenridge.....Laredo Texas  
 Joseph G Breco.....Ada  
 Catherine Brydia.....Ada  
 W A Bullock.....Ada  
 S L Burns.....Maxwell  
 R T Castleberry.....Ada  
 John R Craig.....Ada  
 Isham L Cummings.....Ada  
 B B Dawson.....Ada  
 W D Faust.....Ada  
 T Fuller.....332 E Poplar st Oklahoma City  
 T A Hill.....Roff  
 J L Jeffress.....Ada  
 M L Lewis.....Ada  
 Sam A McKeel.....Ada  
 M C McNew.....Ada  
 H D Meredith.....Ada  
 J S Miller.....Stonewall  
 L M Overton.....Ada  
 S M Richey.....Francis  
 F C Rose.....Allen  
 S P Ross.....Ada  
 W R Threlkeld.....Ada  
 M M Webster.....Ada

## POTTAWATOMIE COUNTY

R M Anderson.....Shawnee  
 G H Applewhite.....Shawnee  
 M A Baker.....Shawnee  
 W A Ball.....Wanette  
 G S Baxter.....Shawnee  
 W C Bradford.....Shawnee  
 R A Brown.....Prague  
 W R Butler.....Crystal City Texas  
 J M Byrum.....Shawnee  
 H G Campbell.....Wewoka  
 F L Carson.....Shawnee  
 Henry L Cone.....Maud  
 G R Connally.....Tribbey  
 W S Cordell.....McComb  
 J E Cullom.....Earlsboro  
 J L Fortson.....Tecumseh  
 W M Gallaher.....Shawnee  
 E E Goodrich.....Shawnee  
 E J Gray.....Tecumseh  
 J E Hughes.....Shawnee  
 E F Hurlburt.....Meeker  
 R C Kaylor.....McLoud  
 J W Marshall.....Shawnee  
 W S Martin.....Wewoka  
 A C McFarling.....Shawnee  
 W N McGee.....McAllen Texas  
 W D Phillips.....Maud  
 Blair Points.....Luther  
 E E Rice.....Shawnee  
 Edward A Rowland.....Norman  
 T D Rowland.....Shawnee  
 J H Royster.....Wanette  
 T C Sanders.....Shawnee  
 J H Scott.....Shawnee  
 J M Stooksbury.....Shawnee  
 James H Turner.....Kings Co Hospital Brooklyn N Y  
 H A Wagner.....Shawnee  
 J A Walker.....Shawnee  
 J E Walker.....Shawnee  
 A J Williams.....McLoud  
 E L Yeakel.....Shawnee

## PUSHMATAHA COUNTY

Ernest Ball.....Ebano S L P Mexico  
 J A Burnett.....Crum Creek  
 Edward Guinn.....Antlers  
 B H Huckabay.....Tuskahoma  
 H C Johnson.....Antlers  
 J S Lawson.....Clayton  
 E S Patterson.....Antlers  
 George Robinett.....Albion

## ROGER MILLS COUNTY

B M Ballenger.....Strong City  
 W S Cary.....Rankin  
 J N Cross.....Cheyenne

## ROGERS COUNTY

F A Anderson.....Claremore  
 A M Arnold.....Claremore  
 Caroline Bassmann.....Claremore  
 J C Bushyhead.....Claremore  
 John S Carriger.....Chelsea  
 R S Evans.....Claremore  
 W F Hayes.....Claremore  
 L H Henley.....Claremore  
 W A Howard.....Chelsea  
 W S Mason.....Claremore  
 M T Means.....Claremore  
 R C Meloy.....Claremore  
 W P Mills.....Claremore  
 J A Patton.....Claremore  
 J C Smith.....Catoosa  
 J M Stemmons.....Oologah  
 J C Taylor.....Chelsea

## SEMINOLE COUNTY

W R Black.....	Seminole
W T Huddleston.....	Konawa
H A Kiles.....	Konawa
W L Knight.....	Wewoka
J A Martin.....	Wewoka
E R McAllister.....	Seminole
C H Sanders.....	Wewoka
M M Turlington.....	Seminole
T H Ware.....	Wewoka
P E Wright.....	Sasakwa

## SEQUOYAH COUNTY

E P Greene.....	Sallisaw
S B Jones.....	Sallisaw
J C Rumley.....	Vian
T F Wood.....	Sallisaw

## STEPHENS COUNTY

J P Bartley.....	Duncan
J R Brewer.....	Doyle
B H Burnett.....	Duncan
C T Caracker.....	Duncan
Joseph B Carmichael.....	Duncan
C P Chumley.....	Comanche
H A Conger.....	Duncan
Edward DeMeglio.....	

607 Colcord Bldg Oklahoma City

H C Frie.....	Duncan
S S Garrett.....	Loco
C M Harrison.....	Comanche
W S Ivy.....	Duncan
D Long.....	Duncan
A M McMahan.....	Duncan
J W Nieweg.....	Duncan
John D Pate.....	Duncan
A R Mavity.....	Marlow
J W Moore.....	Empire
J Arthur Mullins.....	Marlow
S A Rice.....	Duncan
C C Richards.....	Marlow
W S Spears.....	Ardmore
E B Thomasson.....	Duncan
George H Wallace.....	Duncan
A J Weedn.....	Duncan
J O Wharton.....	Duncan
S H Williamson.....	Duncan

## TEXAS COUNTY

William W D Akers.....	Hooker
R B Hayes.....	Guymon
William H Langston.....	Guymon
Daniel S Lee.....	Guymon
William J Risen.....	Hooker

## TILLMAN COUNTY

C Curtis Allen.....	Hollister
J E Arrington.....	Frederick
Otis G Bacon.....	Frederick
W J Brinks.....	Manitou
J W Collier.....	Tipton
G A Comp.....	Manitou
W C Foshee.....	Grandfield
W A Fuqua.....	Grandfield
J Angus Gillis.....	Frederick
H C Harris.....	Grandfield
M M MacKeller.....	Loveland
L A Mitchell.....	Frederick
J D Osborn Jr.....	Frederick
F G Priestley.....	Frederick
J C Reynolds.....	Frederick
T F Spurgeon.....	Frederick
R E Wilson.....	Davidson
Harper Wright.....	Grandfield

## TULSA COUNTY

T P Allison.....	Sand Springs
C E Calhoun.....	Sand Springs
B J Davis.....	Sand Springs

G M Davis.....	Bixby
M J Ferguson 5 DeMayo No 6.....	Despacho No 4 Mexico D F
Onis Franklin.....	Broken Arrow
F S Halm.....	Sand Springs
Bunn Harris.....	Jenks
H L Hille.....	Collinsville
Lawson Hughes.....	Collinsville
B H Humphrey.....	Sperry
Austin Hutchinson.....	Bixby
J H Laws.....	Broken Arrow
B W McLean.....	Jenks
J H Morgan.....	

1135 Riggbsy ave San Antonio Texas

L A O'Brien.....	Skiatook
Emile Roy.....	Howey Florida
W E Smith.....	Collinsville
Harry P Ward.....	Leonard
N S White.....	Sand Springs
F M Wilks.....	Collinsville

## Tulsa Oklahoma

V K Allen.....	519 Palace Bldg
C M Ament.....	601 Commercial Bldg
Walter L Anders.....	416 Daniels Bldg
R Q Atchley.....	315 Palace Bldg
P N Atkins.....	Wright Lab Bldg
Charles H Ball.....	Old Daniels Bldg
Lyman A Barber.....	213 Richards Bldg
J H Barham.....	315 Daniels Bldg
D A Beard.....	508 Robinson Bldg
W W Beesley.....	217 Haver Bldg
J Walter Beyer.....	501 Palace Bldg
J Jeff Billington.....	721 Mayo Bldg
J Fred Bolton.....	201 Atlas Bldg
Fred M Boso.....	New Daniels Bldg
C E Bradley.....	610 Commercial Bldg
James C Braswell.....	726 Mayo Bldg
J C Brogden.....	726 Mayo Bldg
Paul R Brown.....	Wright Lab Bldg
H S Browne.....	207 Atlas Bldg
W J Bryan Jr.....	303 Palace Bldg
James M Buchanan.....	West Tulsa
J P Butcher.....	204 Robinson Bldg
G H Butler.....	315 Palace Bldg
Hubert W Callahan.....	307 Palace Bldg
James M Cannon.....	220 Atlas Bldg
L H Carleton.....	Oklahoma Hospital
P N Charbonnet.....	617 Wright Bldg
H C Childs.....	730 Mayo Bldg
J W Childs.....	730 Mayo Bldg
Fred S Clinton.....	New World Bldg
George H Clulow.....	719 Mayo Bldg
E Ledley Cohenour.....	205 Bliss Bldg
W Albert Cook.....	506 Palace Bldg
T B Coulter.....	215 Haver Bldg
Fred Y Cronk.....	302 Daniels Bldg
Albert C Daves.....	213 Security Bldg
W A Dean.....	2701 E 7 st
Nevin J Dieffenbach.....	708 So Cincinnati st
Roy W Dunlap.....	610 Palace Bldg
J E Dwyer.....	408 Bliss Bldg
Arthur V Emerson.....	733 Mayo Bldg
H Lee Farris.....	Oklahoma Hospital
R C Farris.....	West Tulsa
Roland A Felt.....	602 Commercial Bldg
O A Flanagan.....	303 Haver Bldg
George W Flinn.....	301 Richards Bldg
H W Ford.....	608 Commercial Bldg
Garabed A Z Garabedian.....	615 So Cheyenne st
D L Garrett.....	604 So Cincinnati st
Paul C Geissler.....	123 So Xanthus st
Fred A Glass.....	721 Mayo Bldg
Samuel Goodman.....	319 Roberts Bldg
J F Gorrell.....	Commercial Bldg
Harry Green.....	217 Atlas Bldg
Ross Grosshart.....	217 Wright Bldg

Charles H Haralson.....257 Wright Bldg  
 G E Hartshorne.....204 Bliss Bldg  
 Thomas M Haskins.....Richards Bldg  
 S DeZell Hawley.....1214 Atlas Bldg  
 E Forrest Hayden.....308 Daniels Bldg  
 C T Hendershot.....19 Old Daniels Bldg  
 F W Henderson.....305 Richards Bldg  
 C M Hickey.....219 Atlas Bldg  
 C C Hoke.....726 Mayo Bldg  
 O M Holliday.....734 Mayo Bldg  
 E W Hooper.....213 Masonic Bldg  
 J S Hooper.....610 Commercial Bldg  
 M A Houser.....608 Commercial Bldg  
 W A Huber.....Daniels Block Bldg  
 K B Huffman.....707 Mayo Bldg  
 L T Jackson.....217½ So Main St  
 Charles D Johnson.....202 Atlas Bldg  
 W M Jones.....501 Palace Bldg  
 H B Justice.....608 Commercial Bldg  
 M C Kimball.....209 Security Bldg  
 William G Lemmon.....416 Daniels Bldg  
 Morris B Lhevine.....210 Atlas Bldg  
 C P Linn.....519 Palace Bldg  
 D M MacDonald.....207 Springer Apts  
 P A Mangan.....713 Mayo Bldg  
 Bertha Margolin.....1524 So Detroit st  
 P H Mayginnis.....Bliss Bldg  
 N W Maginnis.....Bliss Bldg  
 William F McAnally.....1218 Exchange Bldg  
 Malcolm McKeller.....604 So Cincinnati st  
 George H Miller.....Atlas Bldg  
 Silas S Mohrman.....607 Palace Bldg  
 H D Murdock.....Wright Lab Bldg  
 P G Murray.....603 Daniels Bldg  
 S Murray.....Haver Bldg  
 F C Myers.....302 Richards Bldg  
 J J Nabham.....311 Commerce Bldg  
 L C Northrup.....719 Mayo Bldg  
 C D F O'Hern.....211 Daniels Bldg  
 George R Osborn.....302 Daniels Bldg  
 James C Peden.....610 Commercial Bldg  
 T A Penny.....Quaker Drug Store  
 J T Perry.....Wright Bldg  
 M L Perry.....Wright Bldg  
 A W Pigford.....519 Palace Bldg  
 L C Presson.....307 Palace Bldg  
 Harry P Price.....710 Commerce Bldg  
 Horace T Price.....615 Commercial Bldg  
 C L Reeder.....213 Atlas Bldg  
 J L Reynolds.....706 Mayo Bldg  
 R E Lee Rhodes.....306 Daniels Bldg  
 T R Roberts.....2047 E 7 st  
 J W Rogers.....710 Commerce Bldg  
 W H Rogers.....312 Bliss Bldg  
 A W Roth.....610 Commercial Bldg  
 F E Rushing.....716 Daniels Bldg  
 M J Searle.....211 Daniels Bldg  
 R G Sherwood.....719 Mayo Bldg  
 D O Smith.....604 So Cincinnati st  
 Ralph V Smith.....610 Commercial Bldg  
 Ruric N Smith.....506 Palace Bldg  
 M P Springer.....604 So Cincinnati st  
 T W Stallings.....114 W 4 st  
 Mont V Stanley.....302 Robinson Bldg  
 Leon H Stuart.....604 So Cincinnati st  
 C S Summers.....312 Bliss Bldg  
 W J Trainor.....210 Masonic Bldg  
 I N Tucker.....302 Daniels Bldg  
 F L Underwood.....510 Palace Bldg  
 A G Wainright.....Security Bldg  
 G A Wall.....303 Palace Bldg  
 J E Wallace.....300 Robinson Bldg  
 Frank L Watkins.....210 Masonic Bldg  
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## HOOKWORM INFECTION RATES IN ELEVEN SOUTHERN STATES

During the years 1910-1915, hookworm campaigns were conducted by state boards of health in eleven Southern states. It was early recognized that the highest infection rate was found among rural school children between 6 and 18 years of age, and consequently special figures were collected for these ages in 422 counties. In order to determine the rates of infection after a period of years, eighty-one of the 422 counties have been resurveyed by W. P. Jacobs, New York (Journal A. M. A., May 17, 1924), during the years 1920-1923. A minimum of 500 rural school children from 6 to 18 years of age have been examined in each county. In the original surveys of these eighty-one counties, 89,857 rural school children were examined, of whom 49,471 were infected, giving a rate of 55.1 per cent. In the 1920-1923 surveys, 44,090 children were examined, of whom 12,236 were infected, giving a rate of 27.8 per cent.; a reduction since 1910-1915 of 49.5 per cent. Of the eighty-one counties mentioned, sixteen in five states, Virginia, North Carolina, South Carolina, Georgia and Alabama, were resurveyed during 1923. In the original survey of these sixteen counties, 3,748 children of the 6,331 examined were infected, giving a rate of 59.2 per cent. In the 1923 resurveys, 2,058 were positive out of the 8,598 examined, giving a rate of 23.9 per cent., or a reduction since the original surveys of 59.6 per cent. The findings indicate that hookworm infection has been greatly reduced. No particular activity can be named as the principal cause of the reduction, but the large number of treatments given during the original campaigns, the educational work in sanitation done then and since, and the service rendered in recent years by health officers, nurses and inspectors are important factors.

## Abstracts. Observations from Current Medical Literature

### THE VALUE OF MILK ACIDIFIED WITH LEMON JUICE

Alfred F. Hess and Milton J. Matzner, New York (Journal A. M. A., May 17, 1924), add fruit juices directly to the milk formulas, instead of giving them to the infants separately and between feedings. Their object in diverging from this practice was twofold—to simplify the technic of feeding, and to render the milk more acid. Lemon juice or orange juice can be added directly to cow's milk without bringing about curdling. By mixing approximately 21 c.c. of lemon juice with a quart of milk, its buffer action is markedly reduced and the hydrogen-ion concentration increased from pH 6.64 to about 5.54. In this way, cow's milk is rendered more digestible and its true acidity in the stomach is made to resemble more nearly that of human milk. Infants who received milk prepared with lemon juice thrived well for long periods. Lactic acid or hydrochloric acid have been added to cow's milk with the same object in view. One advantage of using lemon juice for this purpose is that it also supplies anti-scorbutic vitamin, thus compensating for the deficiency of this essential factor in milk. Egg yolk can be combined with the mixture of milk and lemon juice with but slight alteration of the hydrogen-ion content. This combination is well borne by infants. By this means a food is prepared which compensates for the nutritional deficiencies of cow's milk, furnishing both the anti-scorbutic and the antirachitic factors, as well as additional fat-soluble vitamin and iron.

### RURAL SCHOOLS NEED TEACHERS LIKE THIS

Hogs wallowed in the shade of the country schoolhouse and flies swarmed around the children's lunch baskets until the new teacher took up sanitation. How in a few months she transformed the wretched old schoolhouse into a healthy place for boys and girls is told by Miss Julia Stauffer in the June Hygeia.

The schoolhouse was such a one as is frequently seen in rural districts. The children faced the light; they sat in seats too tall or too small for them; they drank from a common cup out of a dusty, uncovered water bucket; their playground plot was rough and hilly and the hogs sunned themselves in an adjoining pasture. The teacher began to talk health to the children; she called in the parents and talked health to them. When spring came around the old fogies on the school board, who thought the school "good enough," were displaced, and by the next autumn the school was brought up to standard.

Farmers in that district of poor schools were well-to-do and they wanted the best for their children, but it took the new teacher to show them what was wrong with their school buildings and grounds.

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## OKLAHOMA STATE MEDICAL ASSOCIATION

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### GOITER. ITS PROBABLE CAUSE. COMMENTS ON TREATMENT. SPECIAL REFERENCE TO CALCIUM METABOLISM\*

CHARLES W. HEITZMAN, M.D.  
MUSKOGEE, OKLAHOMA

Clinical Types of Goiter.—<sup>1</sup> The classification is more or less artificial because of many variations and combinations of types and changes from one type to another.

1. *Simple goiter.* This is frequently seen in adolescence, pregnancy, and the menopause, the patient may show only slight to moderate degrees of intoxication; rarely severe toxic. Symptoms arise from physiologic overactivity of the gland. The basal metabolic rate averages from zero to twenty plus, microscopically there is hypertrophy of normally secreting gland.

2. *Goiter clinically non toxic.* In this group the thyroid may be enlarged sometimes irregular; may be cystic, colloid, adenomatous, or may show other changes under the microscope. There is no hyperthyroidism and the symptoms are those of pressure from the mass. Basal metabolic rate is within normal limits—from 10 minus to 10 plus.

3. *Toxic goiter.* Under various names this group includes all toxic goiter except exophthalmic. They are usually of long standing; may be of various types as simple, colloid, cystic, adenomatous or even malignant. Symptoms may have existed for a long time, and it may be considered secondarily toxic. Its course is indefinite, with irregular periods of intoxication. Gastro-intestinal crises in exophthalmous are rare; hypertension may be present; basal metabolic rate ranges from 30 plus to 60 plus.

4. *Exophthalmic goiter* shows a hyperplasia of the parenchymatous cells, without or with the enlargement of the thyroid gland. Its course is definite and progressive, although with remissions and exacerbations. The

symptoms include exophthalmous, gastrointestinal crises, and intense general intoxication. The basal metabolic rate ranges from plus 33 to plus 170.

Plummer <sup>2</sup> defines three types of goiter—the colloid, adenomatous, and ophthalmic.

Colloid Goiter.—This occurs in young women, usually the gland is symmetrically enlarged, and its acini are filled with colloid material. The symptoms include nervousness, hypocardia and sweats, metabolic rate usually normal.

Adenomatous goiter.—This is a common type with enlargement of the gland caused by adenomata within the gland, arising from fetal rests. They may be single or multiple, causing a nodular appearance. The metabolic rate may be lower than normal. Hemorrhages may occur if the growth increases in size, causing cysts, or calcareous deposits. About 20 to 25 percent of these goiters develop hyperthyroidism in fourteen to sixteen years. Then the symptoms are similar to exophthalmic goiter without the exophthalmos. The cardio vascular system suffers severely.

Exophthalmic goiter.—This is usually found between the age of twenty and forty. The metabolic test is a proper guide as to the severity of the case and as to results obtained in treatment. This rate is always increased in this form of goiter, and the iodine contents of the gland is usually found low; the gland itself being more or less symmetrical and firm in consistency. There may be some enlargement but in mild cases none at all. However, the size of the gland is no index to the severity of the case.

Diagnosis. The basal metabolic rate is the best single guide in diagnosis and as an index to the effect of treatment. According to many authors toxic goiter shows a basal metabolic rate of plus nineteen to plus sixty; Goiter <sup>3</sup> of adolescents plus ten to plus twenty; goiter of pregnancy plus four to plus thirty-two; goiter of menopause plus twelve to plus twenty-eight. Cretinism minus ten, myxedema minus nine to minus fourteen; exophthalmic goiter plus thirty-three to plus

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

one hundred and seventy.

Basedow or Graves disease<sup>3</sup> is in general but too frequently diagnosed. The following distinctions should be made; 1.—Neurosis of the vegetative nervous system without thyrotoxic symptoms. 2.—Neurosis of the vegetative nervous system with thyrotoxicosis (this may also be described as the "forme fruste" of Basedow). 3.—More or less true forms of Basedow's disease. An important and not uncommon form the "goiter heart" may here be included. It is well known that Basedow is seldom met with in "goiter districts." An ordinary goiter may, however, develop into a light case of Basedow, especially when iodine is administered. This form (*struma Basedowica*) shows accelerated pulse, heart dilatation and later, insufficiency, glistening of the eyes, inclination to trembling and perspiration, very rarely exophthalmos. There appears to be a certain connection between Basedow and pulmonary tuberculosis, the two diseases being frequently found in conjunction.

In addition to the generally known symptoms, alimentary hyperglycaemia is frequently, diabetes mellitus occasionally found in Basedow cases, also arrhythmia of the heart to the degree of arrhythmia perpetua. Exophthalmus is the most important of the eye symptoms; its origin has not yet been fully explained. Some authors regard it as a consequence of sympathetic irritation, basing their opinion on the fact that they have seen sympathetic exophthalmus occur through electrical stimulation. Other authors, however, have failed to confirm this phenomenon. In typical cases, the diagnosis presents no difficulty.

We are still in need of a determinative specific characteristic symptom, in spite of all the attempts made to fix upon one. The blood picture (relative lymphocytosis) is too general and therefore insufficiently convincing. Proofs of increased metabolism can be obtained in large hospitals only, and their significance is not invariably the same. Loewi's Experiment (dilatation of the pupils through the instillation of adrenalin into the conjunctival sac) is based on the sensitization of the sympathetic through disturbance of the thyroid gland; at the beginning and in slight cases, however, it frequently proves to be negative. Other authors found increased blood pressure, fear, trembling, restlessness and palpitation after a subcutaneous injection of 0.5 g. adrenalin (1:1000). This method therefore requires verification. Supply of thyroid gland substance is known to aggravate the Basedow symptoms; this procedure

cannot be carried out for diagnostic purposes without detriment to the patient. Many attempts have been made to obtain serological proofs of Basedow's disease, though none have entirely succeeded. The finding of retarded coagulation of the blood in Basedow has not yet been conclusively proved.

The Probable Normal and Pathological Physiology of the Thyroid.<sup>4</sup>

Where the vagus was cut above the diaphragm or after the injection of atropine, that is in conditions where the end plates of the vagus had been destroyed, the author found that there was no result after an injection of thyroid. In like manner, as the thyroid acts so strongly, on the vagus, so the sympathetic responds to the adrenal, and in experiments with nucleoprotein and adrenal residue (that part of an aqueous extract which remains after the removal of all coagulable materials) extracts of these glands, there was a checking of gastric and pancreatic secretions and a constriction of the circular fibres of the intestine. Adrenalin differs from the extract of the whole gland in that it has little or no effect on the stomach or pancreas. An alcoholic or residue extract of the whole adrenal gland, given hypodermically to dogs, proved violently toxic (thyroid can be given with impunity). When given adrenal nucleo-protein by mouth, however, there was a 50 per cent gain in iodine in six weeks, while with the hydrolyzed aqueous extract (adrenal residue) the gain was 75 to 150 per cent. Analogous to its action upon the stomach and pancreas, the adrenals thus seemed to inhibit the thyroid, probably through its sympathetic nerve supply. Pure adrenalin, on the other hand, shows no effect upon the thyroid iodine content.

<sup>5</sup> The latest determinations place the iodine content of the normal human thyroid at 0.5 mg. per gram of fresh substance. The hyperthyroid gland seems unable to hold this amount, and the severity of the symptoms is more or less proportionate to the thyroid's lack of iodine. Because of the feeding of derivatives of the entire adrenal gland results in a gain in the thyroid's iodine, it is reasonable to believe in some inhibitory effect of the adrenals upon the thyroid, probably through the intermediation of the latter's sympathetic nerve supply. The symptoms of the typical hyperthyroid neurosis are traceable chiefly to abnormal or unchecked activity in the functions performed by the autonomic or parasympathetic nerves. The adrenals normally supply this check upon thyroid function. The hyperthyroid symptoms are traceable to certain hyperplastic

alveoli in the gland. When all, or the greater part of these alveoli can be excised the symptoms quickly subside to those of the initial and underlying hypothyroidism. With regard to the distribution of the hyperplasia, there are three types of hyperthyroid glands: (1) The symmetrically enlarged thyroid of even consistency, vascularity, and contour throughout the entire organ. (2) The asymmetrically enlarged thyroid in which one lobe is larger, denser, and more vascular. (3) The thyroid of the "toxic adenoma" type. The gland may be enlarged but contains a circumscribed tumor.

**Pathogenesis of the Disease.** <sup>3</sup> The earlier teaching, which assumed the sympathetic nerve to be the origin of Graves Disease, has now given away to the opinion that it is due to hyperthyroidism, to overproduction of the iodine-containing secretion of the hyperplastic thyroid gland. The specific secretion of the thyroid gland has been isolated in pure state by Kendall, under the name of "Thyroxin." The anatomical picture of the Basedow goiter likewise confirms the increased activity of the gland. In Basedow patients, the thyroid appears to produce more secretion than normally, or to have lost the capacity for accumulating the secretion in the gland and for supplying the organism in accordance with its requirements, so that more thyroid gland secretion, in irregular quantities, acts upon the metabolism. The purely psychic and nervous disturbances consequent on this disease may be explained as due to the interpolation of the thyroid gland in the vegetative nervous system, the functions of which and consequently of the entire nervous system being thereby disturbed. In classifying Basedow as "thyreogen" and "neurogen," it must therefore be remembered that the true Basedow is primarily and principally an affection of the thyroid gland. Not only metabolic and nervous-system changes are entailed, but also disturbances in the other endocrine glands (abnormal menstruation, etc.). Yet even these are evidently merely consequences of the thyroid gland disturbance or the result of efforts made by the organism to compensate for the thyroid gland affection by changes in the secretion of other endocrine glands.

Alfred Gordon <sup>6</sup> states that at present there are two views regarding the origin of Grave's or Basedow's disease. One is that this disease is of nervous origin and the other attributes the affection largely to a disturbed thyroid function. It is well known that the basal metabolism of Grave's disease is greatly increased; in some cases as high as 66 per

cent. This phenomenon is due to an increased activity of the vegetative functions, the result of stimulation of the sympathetic system. It seems therefore, that some, if not all, of the manifestations of Grave's disease are due to the excitation of the sympathetic system. Genital affections, enteroptosis, nasal polyps, etc., have been followed by Grave's Syndrome, which disappeared following the correction of these conditions.

In support of the endocrine theory it is sufficient to call attention to Klos's feeding of dogs with thyroid secretion from a case of Grave's disease and the result which was fever, tremor, sweating, tachycardia and exophthalmus. Clinical experience shows that thyroid extracts employed in various pathological states provoke, when given in large doses, untoward symptoms resembling those of Grave's Syndrome. Moreover, in Grave's disease, the susceptibility to thyroid extracts is very often great so that the smallest doses may provoke accidents. The conclusions to which such facts lead are that in Grave's disease the thyroid function is perhaps altered and that excessive thyroid secretion probably plays a certain role. That other elements participate, especially the sympathetic, there can be no doubt. The largest number of observers consider the action of the thyroid as the primary cause, or the Grave's Syndrome as due primarily to the effect of a toxic substance originating in the thyroid and irritating the sympathetic system secondarily.

W. S. Brainbridge (Illinois Med. Journal, 1922) states: The thyroid as well as all other glandular tissue is bathed in blood and dependent upon the character of its hæmatogenous environment for both its own nutrition and its proper function in the body economy. As a tissue it must have food. As a gland it must have the proper material to work up adequate secretion, in quantity and quality, for the normal demands of the organism. In writing of "thyroiditis," Leonard Williams states: Of all things in medicine chronic constipation should be the easiest in diagnosis, but it is not. There are hundreds of people who have a daily evacuation but are nevertheless walking septic tanks. These tanks are terrible depressors of the thyroid and unless they are emptied and disinfected, the correct diagnosis of thyroid inadequacy with its logical thyroid therapy will avail nothing. Chronic intestinal stasis is not constipation. Some persons who are markedly static suffer from persistent diarrhœa. In chronic intestinal stasis there may be constipation with diarrhœa—an overflow of fecal matter with

large amounts of poison retained and absorbed by the system. The evidence of several authorities, including Rowell and Chapple, tends to prove that "Alimentary toxemia" is the basic cause of many goiters. These authors cite instances of goiters which have diminished in size or disappeared as a result of surgical measures which secured drainage of the intestine. McGarrison reports cases of goiter successfully treated by means of vaccines prepared from organisms known to inhabit the intestines. While it has been demonstrated that the thyroid gland may be infected from many sources it certainly reacts very markedly to toxins from the intestinal canal.

BRAM, I.: Exophthalmic goiter and pregnancy. *Am. J. Obst. and Gynec.* III, 352-358, Apr. 1922.

The clinical implications arising from a combination of exophthalmic goiter and pregnancy in the same individual are noteworthy. The state of "engagement" is commonly replete with movements of emotionalism in which the sexual instinct plays an important part. In all females with Graves' disease, the sexual instincts and emotions must be suspected as partially or wholly an etiologic factor until the contrary can be reasonably proved. The unengaged girl must be considered apart from the girl already engaged. Her sexual thought and possible habits must receive the necessary attention and should be tactfully corrected. An engaged girl with Graves' disease should consent to immediate estrangement or immediate marriage.

In both sexes, in the presence of Graves' disease, sterility is common, but not the rule. In the female patient though the libido may be normal or acute, there frequently occurs a degree of vaginismus and a dread of coitus. In consequence of diminished frequency of coitus and because of the probable co-existing menstrual disturbances and ovarian hypofunction there may be sterility in some cases. Many patients become pregnant, however.

In an important percentage of cases pregnancy seems to have been the existing cause of the affection. Pregnancy helps rather than hinders improvement where Graves' disease already exists. Especially is this true if the disease has not led to marked degeneration of the vital organs, and if the patient is under the care of a well equipped internist. A moderate aggravation of the syndrome, especially the thyroid swelling may occur in pregnancy, to disappear shortly after delivery. On the other hand, the occurrence of pregnancy in a markedly advanced case of the disease is usually detrimental, as the vital organs are

unable to cope with the increased demands made upon them. Sooner or later nature expels the uterine contents, or if this does not occur, the physical condition may require a therapeutic abortion.

Parturition in a subject of Graves' disease is fraught with at least two dangers; the straining with each pain and post partum hemorrhage. Bearing down not only adds to the undue strain of an overworked heart, but also increases the size and vascularity of the thyroid gland. Lactation is decidedly harmful to a subject of Graves' disease. When repeated pregnancies do occur, there is a tendency on the part of the thyroid toward hyposecretion. Such patients are especially prone to present a combination of hypo- and hyperthyroidism simultaneously, with a predominance of the former. Also, among such patients an occasional "burned out" thyroid is observed, in which the patient, evidently tending toward spontaneous recovery, is seen to overlap this point and soon takes on the clinical picture of a varying degree of myxedema. It is well for both endocrinologist and obstetrician to advise against repeated pregnancies in these patients.

Treatment.—It is well to bear in mind in all cases the possibility of a luetic etiological factor. A trial with specific remedies is always advisable.

Prevention of exophthalmic goiter.—Bramm, of Philadelphia, strongly emphasizes in *Endocrinology*, 3, p. 415, 1923, the importance of prophylaxis of Graves' disease, which should begin in infancy and extend well into adult life, the object being an attempt at perfection in hygienic, dietetic and mental discipline. While during childhood such additional influences as school and home life, companions, recreations, etc., must be taken into account, during the restlessness of puberty and adolescence, the emotionalism, instability of reasoning processes and the physiological thyro-gonadal hyperplasia, which all make for an accentuation of neuro-endocrine instability, should receive most careful guidance. As a sufferer from Graves' disease is no more a victim of goiter than is a sufferer with typhoid fever one of splenomegalia, so called exophthalmic goiter should be eliminated from the classification of goiter, following this, the etiology, prophylaxis and treatment of Graves' disease will receive its proper attention.

1 Early diagnosis is necessary and prompt operation where indicated, early detection and control are needed to insure permanent cure and minimum of tissue changes. Rest in bed is an important agent and may be

all that is necessary, however, the maximum benefit should be obtained in from five to seven days, except in desperately ill cases, who are poor operative risks. However, if the diagnosis is in doubt allow the patients to follow their own routine. In cases of stress the symptoms will be accentuated and an aid to diagnosis. If the patient is under continuous clinical supervision, iodine in the form of sodium iodide may be given in dosage of about two grams a week. This is of great value in mild secondary toxic goiters, but of no value in exophthalmic. Focal infections should receive careful removal when possible, except that in severe cases the toxemia should receive operative treatment first. In some cases the removal of foci of infection was apparently all that was necessary. Radium and x-ray have not been successful in controlling severe hyper-thyroidism in the author's experience. Perhaps because of the difficulty in regulating the dose, and associated effect on parathyroids and thymus.

**Operative treatment.**—This depends upon the time and needs of the individual patient. Ligation of thyroid vessels may be a sufficient measure, or it may be used as a preliminary step. Lobectomy has been discarded. Subtotal thyroidectomy removal of practically all of thyroid substance, except the thin sheet at back of the gland to protect the parathyroid has proved the best treatment of exophthalmic and other severe toxic goiters. This brings about a prompt and satisfactory result in most exophthalmic cases.

**Notes on Management of Simple Goiter.**—School children living in endemic centers should receive one or two grams of sodium iodide in small doses over a period of a month, twice a year, from the years eleven to seventeen, this has proved an effectual prophylactic. Moderate size doses of iodine at time of pregnancy or menopause, and during menstruation, are of definite value in reducing intoxication and attendant symptoms. Foci of infection should be taken care of and meat in the diet should be restricted. No further management is necessary in a majority of cases.

Thus far I have related what is purported to be the latest theories regarding the cause of goiter and its treatment. Standing out, pre-eminently, throughout the discussion is the fact that the enlarged thyroid is merely a symptom of its altered function. That in the background looms up a cause for this disturbance is without question. After a number of years of study of this disease I feel as if I can, at least, draw attention to calcium metabolism as a probable cause—and

instead of directing our treatment entirely to the thyroid gland, extend our efforts to the parathyroids especially. While suggesting this method of treatment, I am fully aware that very many cases of thyroid disease recover without any special therapy being instituted, "Skillful Neglect" is, I believe, the latest coined phrase. The basis for the calcium treatment is, the similarity of the signs of acute infection (fever, tachycardia, sweating, shivering, increased metabolism, hyperglycemia and loss of calcium from the body), to the overaction of the thyroid gland. This overaction of the thyroid submerges the regulating action of the parathyroid as is shown by loss of calcium. As the thyroid disease becomes chronic it leads to a pathological and new level in the sympathetic—para sympathetic balance. By the administration of parathyroid substance and in a less degree by the administration of calcium salts an improvement may be obtained by restoring the normal balance.

As illustrations the following case histories are appended.

*Case I.* L. M. Female. Age 20. Student. Under observation since March, 1906. Family and personal history negative. P. I. Is constipated. Disturbed sleep. Back aches, trembles. Perspires freely. Easily exhausted. Examination. Tonsils enlarged, cheesy exudate on pressure. Thyroid enlarged. Chest negative except tachycardia. Abdomen negative. Tremor of hands. Urine S. G. 1010 otherwise negative. Blood. Hemoglobin estimate, 60 per cent and a relative lymphocytosis. Since the above history was taken her mother has developed a paralysis agitans. This patient progressed favorably and is still in good condition, and still possesses her tonsils. She is now married and the mother of several children.

*Case II.* S. M. H. Female. Married. Age 45. Examined Nov. 1912. Typical case of exophthalmic goiter. Operation suggested but refused. Under observation four months. No definite results. Went home, then consulted a "goiter specialist." Was operated upon and I was informed survived the operation but a short time.

*Case III.* G. S. E. Female. Married. Age 53. Under observation since 1912. Thyroidectomy performed 1910 or 11. Results were not good. For periods extending over months has relief from symptoms. Then a return. Always responds to treatment promptly.

*Case IV.* C. H. Female. Widow. Age 46. Under observation since Oct. 1919. Enlarged thyroid with typical symptoms and in

addition thereto a large fibroid of uterus. Results good. She has not been operated upon for the fibroid.

*Case V. V. A. E. Female. Single. Age 22.* Under observation since Nov. 1921. Has a T. B. history. Thyroidectomy 1920. Results fairly good for several months, then a return to preoperative symptoms; tachycardia, fainting attacks, perspiring and trembling. Loss in weight. Results in this case were prompt for the good and have remained so.

*Case VI. J. L. Female. Married. Age 26.* Developed typical symptoms of Grave's disease during May 1923. Has a T. B. history in addition to enlarged thyroid. To date has responded excellently to treatment, and subjectively is well.

*Case VII. T. S. J. Female. Age 23.* Married. Family and personal history negative. Has felt well until quite recently. Now is extremely nervous, trembles, especially hands. Does not sleep well. Heart palpitates. Finds herself, frequently, bathed in perspiration although she feels cold.

Examination. March 1921. Enlarged thyroid. Dermographic skin. Chest negative except tachycardia—pulse 106. Abdomen. Strongly pulsating aorta. Uterus enlarged. Pregnant. Under observation until delivery which was normal. Results from treatment were excellent and so remain.

All of these cases received, essentially, the same treatment: Calcium in some form or parathyroid substance when it was available. Rest, in bed, suitable diet, and thorough intestinal elimination. The past few years I have employed the duodenal tube for the latter purpose.

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### FOCAL INFECTION AS A CAUSE OF URINARY DISEASES OF WOMEN\*

FENTON M. SANGER, M.Sc., M.D.  
OKLAHOMA CITY

The sources of excretory renal infections are innumerable. Focal infection in various

parts of the body, or catarrhal infections involving the various mucous membranes may be the nidus of these infective bacteria.

We know that the usual source of the bacillus coli infection is the intestines, while the many other bacteria are derived from the roots of the teeth, adenoids, tonsils, accessory nasal sinuses, furuncles, salpingitis, appendicitis, scarlet fever, etc.

Although the following system is not carried out in all hospitals or clinics, yet personally, we believe it to be the better arrangement to keep the gynecological and urological diseases of women in the same hospital apartment.

I believe firmly that under such arrangements our female patients would have their genital and urological organs best differentiated and best treated in the department which combines the consideration of the entire urogenital organs.

We are of the opinion that many physicians, who devote special care to urology, have not yet grasped the importance of the fact that distant foci of infection have a deleterious influence on the urinary organs. I do not expect to give any especially new material or discoveries, but rather to call attention to facts which have existed all along, but which many of us have not seen simply because we are not suspecting such clinical or pathological relationships, in the body, hence we are not looking for them.

In times past we have, and from past operative cases we have treated we know others have operated for appendicitis, endometritis, ovariitis, salpingitis, etc., when the real lesion was in the urinary tract.

I began to give especial attention along these lines about seven years ago, and the more I study this subject, the more convinced am I that many of the diseases of the urinary tract of women are relieved and completely cured by removing these focal infections.

I will review a few cases: A married woman, 47 years old, had an attack of rheumatism at the age of 39. She had suffered with intermittent bladder trouble for ten years. The attacks occurring, however, only three to four times a year up to about a year and a half before I saw her. During this last year and a half she had constant bladder trouble and had to wear a napkin for her incontinence when she left the house. In addition to this incontinence, she had severe pains in the lower abdomen whenever she walked, did her housework, or rode in any vehicle that jarred her. She had received a

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

great deal of treatment for the above at Omaha, both general and local, without getting any favorable results. After reviewing her history I suspected a tuberculosis of the urinary tract with a resulting atrophic bladder.

But on examination I was surprised to find she possessed a large, normal appearing bladder and to find the urine perfectly normal. When her urethra was distended with the local anesthetic the referred pain was produced which she had been having for several years in the lower abdomen. I found the urethra granular, red, and very tender.

She was given a urethral dilation and treated with silver solution. The treatments were given every nine days when 10 per cent silver was used, and twice weekly when 3 per cent silver was used. She had this treatment without any results for three months.

One day she asked why her throat was sore as long as she felt special pain from the treatments. And in questioning her I discovered the throat remained sore about three days when I employed the stronger solution, and only one day when I used the weaker solution. On examination I discovered that she had chronically inflamed tonsils. These tonsils were removed. For three months following the tonsillectomy she came for local treatment only four times. At the last examination and treatment there was a slight granular redness over the inner third of urethra, and two years after her operation all her abdominal soreness had disappeared and she never had to get up at night to urinate and had no bladder pain when she did her housework, or when she walked or rode.

In young children, generally, the foci of infection that produce these urinary affections are the tonsils and adenoids. In young adult and early middle life they are caused more by sinus infection, teeth, and appendicitis. In middle age and old age they are caused most often by diseased teeth and often the gall bladder as well.

Mrs. G., married, aged 25, came to us giving symptoms of pain intermittent with nausea at times, in the region of the appendix for two years. She had at times gas on the stomach and dyspepsia. But so far as she knew she had never had fever.

She had received various general treatments, and had been advised to have her appendix removed. Upon examination there was pain deep in abdomen over the McBurney area and especially over the iliac crest. Her urine contained a few red and white cells,

some granular casts, and small amounts of albumin. Bladder mucosa was normal. The right ureter orifice was congested and pouting.

On dilating the ureter with catheter this pain was elicited in the appendix area. Ten percent argyrol was instilled each time. After three such treatments this lady was free from pain for six months when the old symptoms returned. We then went into her history more closely and found that she had buried adherent, tonsils and that she had suffered with tonsilitis when a child, and that she had one badly decayed tooth. The tonsils were removed and the tooth treated and now for twelve months she has been free of her "appendicitis." This woman was suffering from stricture of right ureter, evidently caused by the diseased tonsils or tooth or most likely, by both.

Another case, Mrs. H., aged 34, wife of an officer in the army came to us during our service in the late war. On examination we found an exophthalmic goiter, which had existed with increasing symptoms for twelve years. For the past year patient had symptoms of parenchymatous nephritis. She had some edema of the lower eye lids, the upper and lower extremities, urine slightly increased in amount, specific gravity 1015 and pale, albumin slight. There were hyaline casts, dark granular casts, free fatty renal cells with occasional blood.

We first treated her for kidney trouble and after getting the urinary trouble cleared up she left the hospital without permitting us to operate on her. In three months she returned with the original kidney symptoms. We again got her urine in fair condition and then did a thyroidectomy under gas. She made an uneventful recovery and six months after her operation she wrote me she was feeling well and all her kidney troubles had disappeared.

I might mention more cases to prove the facts of my theme, but record these few in the hope that we will all be on the outlook for such lesions and give our patients the careful, scientific treatment they desire, and not subject them to so many ill advised operations from which they received no benefits in the past as we all know.

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*Discussion:* FRANK J. BAUM, M.D., MCALESTER.

The extension of infection by the blood stream has for years been the source of much concern, not only to the urologist but all branches of practice, and I can see no reason why it should not occur in Dr. Sanger's prac-

tice the same as it has repeatedly to the remainder of us.

It does not appear to me that the dissemination through the blood stream from focal infections is often from the generative to the urinary organs, more often, when this occurs, the infection travels by the lymphatics or contact and the blood-borne infections are more apt to be from distant foci as in the gall-bladder, teeth, tonsils, etc., consequently in clinical work it is the duty of the urologist, or the diagnostician in any particular branch to go into each case completely for himself. Today we depend too much upon other specialist to make diagnoses. Every man doing special work should be thoroughly familiar enough with general examinations so that he can complete a diagnosis except where special skill or equipment is required as in the use of the x-ray or cystoscope.

The main thought brought forward in the Doctor's paper is worthy of emphasis and appears to me to be "Do not overlook the possibility of local urinary conditions being secondary to other foci infections" and I want to add that we must in this era of specialization use great care lest we lose, by depending upon others, our ability to complete a diagnosis for ourselves.

## A USEFUL PROCEDURE IN SACRO-ILIAC STRAIN\*

JAMES C. JOHNSTON, M.D.  
MCALESTER, OKLA.

Because of the difficulty in demonstrating slight pathology in the sacro-iliac region by use of the x-ray, this agent is frequently considered as being useless for such a purpose.

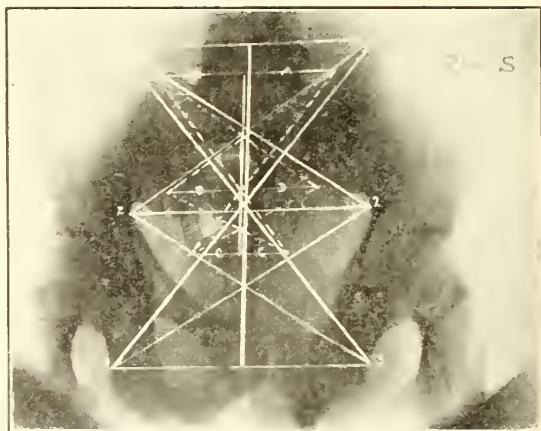
After the careful study of eighty-nine cases in which examination of the pelvis was a part of the procedure, eight of the cases bore evidence of variations in certain measurements which characterized them as examples of an injury at the sacro-iliac synchondrosis.

To further encourage the belief that such measurements are of some value, only the eight cases showing such variations in the proposed lines were accompanied by the symptoms of a sprain or slipping at this point. Furthermore, treatment for sacro-iliac sprain was attended by benefit or a cure.

The proposed lines may be drawn as follows:

At a convenient point high on the ilium draw a line straight to the corresponding point on the opposite side; about midway of the pelvis, repeat the procedure. Then drop to a point on the ischium and draw a line to a corresponding point on the opposite side.

Connecting these lines by diagonal lines drawn from upper left to lower right, and upper right to lower left the diagonal lines will cross in the arbitrary center and there will be three such points. Now, if these centers are connected by a perpendicular line it will establish the arbitrary center for the ilium and the ischium.



SHOWING SLIGHT VARIATION OF PERPENDICULAR LINES, SUGGESTING A SACRO-ILIAC "SLIPPING"

The measurements of the sacrum are made in the same manner, drawing lines from the left superior to right superior point, then somewhat near the mid portion connect left and right points and finally, the lowest portion where the left and right points can be connected by a straight line. This gives three horizontal lines from the sacrum. If these be connected by diagonal lines drawn from upper left to lower right and upper right to lower left there will result three centers. A perpendicular line bisecting these centers will be the arbitrary middle of the sacrum.

In cases where there is no slipping of the sacro-iliac synchondrosis the iliac and the sacral lines will meet on the same perpendicular line; but if this is not the case it suggests that their relations are disturbed.

The procedure is not difficult to apply and if used generally will soon be proved as to its ultimate value in many hands.

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

## GONORRHEAL RASHES, CASE REPORT\*

J. S. HOOPER, M.D.  
TULSA

The usual manifestations of gonococcal infections are too well known to merit description, leaving out the symptomology, bacteriology and pathology, and giving a description and case report of the less known and rarer manifestations of this most common disease.

The skin manifestations of gonorrhea—The gonorrheal rashes—are five (5) in number; only one is due to the organism itself, the other four being due to its toxins.

The rashes are:

1. Gonococcal ulcer and abscess.
  2. Toxic erythema.
  3. Toxic urticaria.
  4. Toxic hæmorrhagic and bullous dermatitis.
  5. Toxic Hyperkeratosis.
- Lulcus blenorhagicum.

Although many of the ulcers which appear during a gonococcal infection are doubtless of a secondary nature some are certainly due to the gonococcus itself. In the laboratory it is easy to prove and demonstrate this in films and cultures, clinically it is impossible to differentiate the ulcers caused by a secondary infection from those caused by the gonococcus, and these ulcers are commonly mistaken for soft sores. They are more common in women than men; they may effect the genitals or surrounding tissues, they may be large or serpiginous although rare, but they do occur and are difficult to cure. The most common are small and craterform edges raised but not undermined and the surrounding inflammation is not marked as in the soft sore.

## TOXIC RASHES.

Toxic rashes, though seldom described, are of frequent occurrence and are generally attributed to drug rashes, being very similar; at times closely resembling scarletina or

measles; conjunctivitis is common; urticarial, hæmorrhagic and bullous exanthema are rare and only a few cases have been described. The most distinctive gonococcal rash is toxic hyperkeratosis; most commonly called keratosis or keratoderma blenorhagica.

This malady belongs to the hyperkeratosis, begins as an inflammation characterized by a marked exudation of leucocytes, chiefly polymorphonuclears, with some massed cells which surround the dilated blood vessels of the papilla and extend into the epidermis; this is followed by parakeratosis of the upper layers of the epidermis. The lesions are primarily vesicles becoming pustular, later becoming keratinized, the run together forming psoriasiform masses on any part of the body, most frequently on the feet, hands and elbows.

This rare affection was first recognized by Vidal in 1893 and a limited number of cases have since been reported by other French observers, Sequera and Little in England, Bearman Arningand, Meyer-Delius in Germany and by Simpson in the U. S.

Case Report: Aug. 23rd, '23, Dr. Horace T. Price referred me this case. Male, age 38, one previous attack; several years previous no complications, duration of this attack about one month, acute posterior urethritis symptoms marked. One week after coming under my treatment a dark erythema developed covering the pubes genitals, extending over inner and anterior surface of thighs, symmetrical, at about the same time there appeared on hands and wrists most marked on plantar surface soon became pustular, later keratinized healing by desquamation.

This case differed from the typical in that there was at no time any arthritis, the appearance at about the same time of an exanthema and keratosis, prostate was involved but did not abscess, developed a para urethral abscess which was opened externally, had been taking no drugs with the exception of some alkalis and opiates.

Treatment was usual as directed irrigations massage and serums.

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924

## THE INTERNAL EAR AS A FACTOR IN DIAGNOSIS\*

ALONZO C. McFARLING, M.D.

SHAWNEE

Impelled to specialization by the rapid progress of modern medicine, we should be impressed with the importance of so correlating the net results of such specialization that a greater efficiency may be attained in the diagnosis and alleviation of human ills.

The value of the information gathered from the study of the eye and from nerve pathology of the eye is universally conceded, but it is only in the last few years that similar possibilities in ear study have come to light.

The eye specialist not only relieves conditions strictly confined to ocular tissues themselves, but he is asked by men in other fields of medical and surgical work for information concerning intracranial conditions, renal, and vascular diseases, metabolic disturbances, varied evidences of intoxications, and is also asked to interpret their significance in relation to the general health of the patient. As a result of this sort of service, ophthalmology has for years taken its proper place in general medicine.

Now, otology is entering into a similar field of usefulness, but it is only in the past few years that the function of the vestibular portion of the labyrinth has been carefully studied in its relation to the central nervous system. Physiologically the internal ear may be divided into three portions the acoustic labyrinth, concerned exclusively with the function of hearing; the static labyrinth for the maintenance of station; and the kinetic labyrinth for the recognition and analysis of motion.

The underlying principle of the physiology of the labyrinth is that, primarily, the end organ is a hair-cell, stimulated by wave impulses through the medium of the endolymph. Within the cochlea these hair-cells are grouped into an auditory apparatus known as the organ of Corti. Three to six thousand units of Corti's organ extend throughout the entire cochlear tube. The second type of endo-organ known as the macula is found in the macule and utricle, one in each. The third type of end-organ is found in the ampulla of each semicircular canal, the hair-cells being grouped in a ridge or crest known as the crista.

In the hair-cells of these various sense organs we have the origin of all the peripheral filaments of the eighth nerve, which of itself consists of two distinct bundles; a cochlear portion and a vestibular portion united within one neurilemma. The nerve is approximately one-half inch long and extends from the internal auditory canal to its entrance into the brain stem at the junction of the medulla oblongata and the pons, where it again breaks up into its respective cochlear and vestibular portions. The course of the auditory fibres has been histologically demonstrated by various investigators, so that the pathways along which sound impulses travel are more or less known. But, the recognition of the ear as the chief organ of equilibration is so recent that most of its intracranial pathways are still undetermined.

Cajal has shown that fibres from the vestibular portion of the eighth nerve enter Deiter's nucleus and continue through the inferior cerebellar peduncle into the cerebellum itself, beyond which point we have as yet had no histological demonstration of their course. But, notwithstanding our present lack of histological data that vestibular fibres do continue their course throughout the brain in such a manner as to afford a nerve pathway for impulses from the ear to practically all the motor centers in the cerebral cortex, is a presumption founded in fact as evidenced by the normal responses of the body to stimulation of the ear by the well known methods of turning, and caloric tests. For instance, stimulation of the horizontal semicircular canals by turning to the right, results in drawing the eye to the right, vertigo to the left, and past-pointing to the right. If an impulse from the ear to the brain results in drawing the eyes to the right, it necessarily follows that there must be a pathway from the ear to the motor centers which control the muscles responsible for such movement. Similarly, if past-pointing of upper or lower extremity, as the case may be, is the direct result of such stimulation there must of necessity exist a nerve pathway from the ear to the nerve centers in the brain controlling arm or leg muscles in order that such stimulation may result in that incoordination of arm or leg movement known as past-pointing.

In like manner we may conclude that the conscious sensation of vertigo when present as a result of ear stimulation, is the cerebral interpretation of impulses which can reach the cerebral centers only by traversing definite nerve pathways from the ear to the brain.

The internal ear, then, as the chief organ of balance or equilibration, assumes an im-

\* Read before Section on Eye, Ear, Nose and Throat, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

portance far greater than the ear as an organ of hearing. As such it must be abundantly supplied with nerve pathways connecting it intimately with many nerve centers which in their ultimate distribution affect the entire body. The newer ear tests stimulate not only the ear itself but this entire widely distributed nerve apparatus. If a stimulus applied to the ear produces phenomena very remote from the ear itself, parts of the body even as remote as the foot being affected by stimulation of the vestibular labyrinth. It is evident then that all these parts of the body can be affected only because of nerve pathways connecting them with the internal ear.

When stimulation of the ear produces the expected normal phenomena, it demonstrates that these particular pathways are intact; an absence of normal responses indicates an impairment of the ends or lines of these pathways. When we consider the intimate relation of the internal ear to the rest of the body through the nervous system, it at once becomes apparent that a wealth of information may be obtained from such a study. The proper analysis of the ear, its function, and its associated intracranial nerve pathways, then, although it is obviously an otological study, primarily as yet useful in the analysis of ear conditions, has a much broader significance in its usefulness as a means of providing data in general medical and surgical diagnosis.

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#### ADMIRATION IS BEST THING FOR GRAY HAIR

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The best thing to do for gray hair is to admire it.

So says *Hygeia*, popular health magazine, in its July issue in an article "To Dye or Not to Dye" by Dr. Arthur J. Cramp. Nothing will check the occurrence of gray hair, and all devices for that purpose are useless, it declares.

Dr. Cramp, in his article, considers ten hair dyes now on the market and shows by chemical analysis that each one of them contains harmful and dangerous ingredients.

These dyes are: Mrs. Potter's Walnut Tint Hair Stain, Eau Sublime, Mrs. S. A. Allen's World's Hair Color Restorer, Barbo Compound, Kolor-Bak, La Creole Hair Dressing, Q-Ban Hair Color Restorer, Wyeth's Sage and Sulphur Compound, Farr's Gray Hair Restorer and Mary T. Goldman's Gray Hair Restorer.

Each of these hair dyes contains one of three dangerous drugs—lead, silver nitrate

or an anilin derivative. Although it would be foolish to say that every person using a hair dye will suffer from systemic poisoning, Dr. Cramp declares, it is strictly within the truth to say that any one using a dye containing one of these three drugs may be so affected.

Some skins are extremely sensitive; others withstand a good deal of abuse. Much also depends upon the method of applying the dye.

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#### BOTTLE BABIES MUST HAVE ORANGE JUICE

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Bottle babies should have their milk supplemented by orange juice, beginning at the age of one month.

This is the opinion of Dr. Victor C. Vaughan, nationally known writer on health subjects, who contributes an article on "One Less Danger for Explorers" to the July *Hygeia*. The conquest of scurvy has robbed exploration of one of its perils, but there are still infants who are affected by it because of a lack in their diet.

"An infant taking its nourishment from the breast of a properly fed, well nourished, healthy mother needs no extra antiscorbutic food," says Dr. Vaughan. "But the child fed on cow's milk should have orange juice. When this cannot be obtained, strained canned tomatoes will do."

At the age of one month, one teaspoonful of orange juice diluted with water and sweetened with sugar should be given daily, and the amount should be gradually increased until at three months of age the child receives two tablespoonfuls daily. If the child regurgitates the orange juice it may be rendered slightly less alkaline by the addition either of lime or sodium bicarbonate.

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#### BEST NOT TO GRAFT LEG SKIN ON FACE

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In repairing injuries to the face, it is better not to graft on it skin from the leg, according to *Hygeia*, popular health magazine, in its July issue.

Leg skin and face skin are not the same color and the general effect is not apt to be good, the magazine points out. It is always better to take the skin from a point as near the face as possible.

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### EDITORIAL

#### AN ADVANCE IN MORBIDITY STATIS- TICS FOR OKLAHOMA

State Commissioner of Health, Dr. Carl Puckett, announces that arrangements are being perfected by which Oklahoma physicians will be supplied with printed blank forms, postage attached, to be used for reporting various communicable diseases. Such reports may be made to any and all city, county or State health officers, the object being to obtain, with minimum effort and as quickly as possible, information by which epidemic diseases may be met and checked.

This is a distinct advance over the former system which never contemplated the rela-

tive severity of various infections. Epidemic meningitis, diphtheria, scarlet fever, typhoid etc., call for immediate, drastic, common-sense methods of control and prevention. Delay of a few hours in most of them may spell tragedy, may result in death easily avoidable by simple means, but which are futile after lapse of a short time. The keystone in, and of all this effort is the general practitioner. He sees the case first, must note the common danger signs, and combat them at the hour of opportunity. Later calling of the most expert and efficient is a forlorn hope, useless, and as a rule, a reflection upon the man who should have known the potential dangers at the outset, at the time when simple measures would have been life-saving. Our present modern ideas and advancement no longer condone repeated spread of infections, due to lack of ordinary diagnostic acumen or neglect of simple means of diagnosis to be had throughout the State. The question of cost is not a factor, for the State laboratory, and several of our cities have efficient laboratory service for those unable to pay. In fact, it may be said that very few of our citizens are out of touch with the most intricate and technical laboratory service they may require.

#### Editorial Notes—Personal and General

DR. J. T. PHELPS, and wife, El Reno, visited Chicago last month.

DR. THOMAS A. LOVE, Ripley, is spending a short vacation in Texas.

DR. and MRS. R. F. TERRELL, Stigler, visited recently in Kansas City.

DR. J. P. MILLER, Norman, has removed to his former address, at Erick.

DR. and MRS. J. T. RILEY, El Reno, attended the A. M. A. meeting at Chicago.

DR. BENJAMIN DAVIS, Cushing, attended the A. M. A. convention at Chicago.

DR. and MRS. J. F. RENEGAR and children are motoring to Tennessee on a vacation trip.

DR. SHADE D. NEELY, Muskogee, has been appointed Roentgenologist for the U. S. Veterans Hospital No. 90, at Muskogee.

DR. C. A. JOHNSON, Wilson, is a candidate for the office of Department Commander for Oklahoma, of the American Legion.

DR. LEILA ANDREWS, Oklahoma City, left last month to spend the summer abroad.

DR. and MRS. EDWARD De MEGLIO, Oklahoma City, sailed June 17th for a year's stay in the Orient.

DR. C. DOLER, Sentinel, is moving to Foss, where he has entered into partnership with Dr. E. F. Stephens.

DR. J. B. CLARK, Coalgate, is taking post graduate work during June at Washington U. and the St. Louis clinics.

DR. JAMES H. CASH, Stillwater, has been acting Payne County Health Officer, since the death of Dr. J. B. Murphy.

DR. O. C. NEWMAN, Shattuck, recently performed thirty tonsil and adenoid operations at the County Clinic at Shattuck.

DR. ALLEN LOWERY, Blackwell, is making a trip by auto to his old home town, Salem, Kentucky, to spend several weeks.

DR. C. K. LOGAN, Hominy, spent two weeks in post-graduate work at the Mayo Clinic at Rochester, followed by some more at Chicago.

DR. W. A. LACKEY, Oklahoma City, has been reelected School Physician for the ensuing two years by the Oklahoma City School Board.

DR. G. I. WALKER, Hominy, is taking a post-graduate course at the Mayo's at Rochester, and a three weeks' course at the Chicago clinics.

DR. GUY CLARK, Milburn, has removed to Durant, after returning from a tour of several states, accompanied by his wife and daughter.

DR. C. D. BLACHLY, Drumright, has removed to Oklahoma City, where he will engage in the specialty of diseases of the stomach and intestines.

DR. P. M. RICHARDSON, Cushing, spent some time in the East last month, attending the Rotary International, and doing some special work in Chicago.

DR. C. L. ZIMMERMAN, Ponca City, has removed to Oil City, Pa., where he has taken a position as assistant medical examiner for the Pennsylvania R. R.

DR. M. H. NEWMAN, Oklahoma City, attended the A. M. A. meeting at Chicago, and is taking several weeks of post graduate work at the Lying-In Hospital at New York.

DR. and MRS. A. S. HAGOOD, Durant, are autoing overland to Portland, Ore., where the doctor will take some post-graduate work, and expect to be away several months.

DR. CHARLES W. TEDROW, Woodward, has been selected as Grand Commander, at the annual conclave of the Knights Templar, succeeding Clark Tucker, of Pawhuska.

DR. and MRS. W. M. GALLAHER, Shawnee, were hosts recently at a picnic for the local members of the profession, marking the close of the society's meetings for the summer.

DR. and MRS. F. B. FITE, Muskogee, attended the wedding of their son, Edward H. Fite on June 12th at Charlottesville, Va., where he was married to Miss Elizabeth Coleman Williams.

DR. S. ERNEST STRADER, Oklahoma City, has been appointed Secretary-Treasurer of the Oklahoma County Medical Association for the remainder of the year, vice, Dr. E. Lee Jones, resigned.

THE MEDICAL ARTS BUILDING, Oklahoma City, now in process of construction, has been almost fully rented, according to Dr. John S. Pine, chairman of the stockholders committee, and it is contemplated to add another story to the building.

CUSHING MUNICIPAL HOSPITAL has been placed under the control of one physician, the city officials feeling this would work for greater efficiency and satisfaction, both professionally and financially. The institution will continue to be open to all practitioners, being a place where the latter can do his own work if he so desires.

STATE DOCTORS guilty of illegal advertising, moral turpitude and habitual drunkenness are to be proceeded against, according to Mrs. Kathryn Van Leuven, assistant attorney general, on evidence submitted by the state board of medical examiners. The board expects also to revoke the licenses of several physicians convicted of felonies over the state since the examiners last met.

WOODWARD COUNTY MEDICAL SOCIETY met May 29; the program included a clinic, from 10 to 12, conducted by Dr. E. S. Lain, Oklahoma City, the regular session of the Society at 2 p. m., with an address by Dr. Lain and Mr. Hixon of the Public Health Service, concluded with an open meeting at the Christian Church. Thirty-five physicians were present, including twenty-nine of thirty-one enrolled members of the Society.

#### DOCTOR JOSEPH M. STEPHENS

Dr. J. M. Stephens, of Hastings, passed away on June 20, 1924, at his home, after a practice of over thirty-one years, twenty-one of which he resided at Hastings, Okla. Dr. Stephens was born at Denton, Texas, on February 1, 1872, and graduated from the St. Louis College of Physicians and Surgeons in 1893, and licensed to practice in Oklahoma in 1902. He was a member of the Jefferson County Medical Society for many years. Funeral services were conducted from the family home on Sunday, June 22.

Dr. Stephens, in his long service to the people of Jefferson County, made many friends, and was held in high esteem among both them and his fellow practitioners; and his loss will be felt keenly by both.

## DOCTOR JAMES B. MURPHY

After thirty-five years of active practice, Dr. James B. Murphy, of Stillwater, a pioneer of Payne County, passed away on May 19, 1924, following an illness of several weeks. He was born at New Albany, Indiana, on November 30, 1856, and left his home at an early age, obtaining his education through his own efforts, finally graduating from the University of Louisville in 1881. He was married the same year to Miss Anna K. Smith, and settled in Kansas. He has been practicing in Stillwater since 1889, where he was active in his profession until his death. Intermment was made at Stillwater. Dr. Murphy is survived by his wife and two children, and three sisters, and two grandchildren and a great grandchild.

Dr. Murphy was one of our "Old Guard," a most likable, loyal friend. Recipient of what was then a collegiate course, he attended the University of Louisville where he graduated. He practiced in Indiana a year, then in Kansas seven years after which he moved to Oklahoma.

Physician for years to the Agricultural and Mechanical College, he numbers friends by hundreds, long since recalling their association as a pleasant memory. He held many appointments of trust including surgeon for the Santa Fe, Health Officer of Payne County without interruption since Statehood, besides many other positions of trust.

His demise is regretted by scores of professional friends who always enjoyed his presence.

*Abstracts. Observations from Current Medical Literature*

## GENERAL SURGERY

Edited by G. A. Wall, M. D., F. A. C. S.  
303 Palace Building, Tulsa

**SURGICAL SIGNIFICANCE OF PAIN.**—Haggard, W. D. Surg. Gyn. & Obst., Feb. 1924, p. 207.

The author states that pain is the chief defense mechanism against injury and apprises us of many diseased states and accidents. Pain, in some regions, is easily recognized as characteristic of definite pathological processes, often bizarre and mixed with many conflicting manifestations—so greatly modified by the individual as to be deceptive—a highly neurotic subject becomes an amplifier. While nothing is more telltale than the explosive upper abdominal pain that goes thru the back in gallstone colic, a great percent of gall bladder cases do not have this frank manifestation. The complications of most diseases obscure the initial pain.

The most deceptive pain in the abdomen is the abdominal pain in children with beginning pneumonia, in which case the pleura is involved—this should cause the clinician to be on his guard and

## DOCTOR WILLIAM NAIRN

Dr. William Nairn, of Alluwe, died of cerebral hemorrhage on May 18, 1924, in Oklahoma City, while attending the annual meeting of the Oklahoma State Medical Association, as representative of the Nowata County Medical Society, after an illness of but a few days.

Personal acquaintance with Dr. Nairn opened to his friends a vista of unusual experiences and reflections. It was the writer's privilege and delight to meet him, hear him express, always in the most chaste and kindly terms, his ideas and experiences. A pioneer physician years before the name of Oklahoma or even the possibility of statehood for this country was thought of, living a very active and useful life, he was friend and supporter of the best and good, a man scorning the smallness and meanness of the demagogue, content to let time tell the story. Discussing some of his amazing experiences to the writer, he, more than once jocularly wondered how some of Oklahoma's so-called political-medicos attained what he called the "spot-light" of honor. Knowing too much about them, however, did not provoke his satire. He was willing again to leave the matter to time. When addressing a meeting he always recalled some personal experience which left his hearers in a gale of laughter.

Sincere personal regret on the passing away of Dr. Nairn does not express the feeling of sadness felt upon notice of his death. A few hours had elapsed after he had grasped my hand with his characteristic welcome, when death called him to his reward. There is not a lingering doubt but what he will be greeted in the hereafter as one who filled his allotted place and performed his duty at all times as a kindly, sympathetic man does. Generous, discriminating and forgiving of the frailties of his fellowman, his face at all times beaming with the smile of kindness, unusually endowed with what is called "native" power, greatness and wit, one could not know him without a feeling of admiration. A high-minded noble estimate of any and all things was his constant attitude. To know him and have him call you friend was always an inspiration toward a better outlook. His loss is recorded with a deep feeling of regret and sadness.

examine the chest carefully in these cases.

In herpes zoster the pain may simulate a mild cholecystitis and the true cause will only be discerned when the vesicular pattern appears. The whole subject of pain must be considered from a neurologic standpoint—only by knowledge of the nervous distribution can one correctly interpret the occult origin of pain—witness the referred pain along the inner side of the knee, along the branch of the obturator nerve in hip-joint disease in children.

Disaster follows our lack of interpretation of its importance—for instance, the excruciating pain in the shaft of one of the long bones, in a child

with chills and fever, call for the recognition of an acute osteomyelitis; this condition murderously disguised as rheumatism, if not correctly diagnosed, is disastrous in its consequence.

All abdominal pains are not due to visceral disease—tuberculous disease of the spine, with pressure on the spinal nerves, may give pain over the abdominal wall. The abdomen has been opened for a unilateral referred pain due to caries of the spine, which required only a brace.

The gastric crises of tabes must be thought of, as well as plumbism. He is the best surgeon, who is able not only unerringly to recognize the surgical significance of pain, but who also will divine the significance of nonsurgical pain.

**TREATMENT OF EMPYEMA.**—Bettman, Ralph Boerne. J. A. M. A., Feb. 2, 1924.

The author states that in the face of convincing evidence in favor of the closed method there must be some reason, why it is not more popular. He thinks that during the war it was demonstrated experimentally and clinically, that the closed method was a simple, expedient and satisfactory method. In the last three years he has been using the trocar method of Greensfelder, especially in children and finds the results gratifying.

The operation is easily done, the after course much more comfortable than with the open method, and the occurrence of chronic empyema very slight.

The procedure is as follows: Cleanse the skin with soap and water and alcohol at the site of insertion of the drainage tube. Local anesthesia is used and No. 14 French soft catheter inserted. An exploratory puncture is made and the needle and syringe are left in situ as guide. The trocar is forced through the chest wall into the empyema cavity, the stylet is withdrawn, the catheter is clamped at its funnel end and threaded through the sheath of the trocar. It is important that the catheter fit very snugly, so that it requires a lubricant to assist in its passage. This is because it will permit air to get into the chest cavity after the withdrawal of the sheath of the trocar, which would vitiate the whole procedure. The catheter is held in place by adhesive tape and not by a safety pin, since the pin prick might permit ingress of air, thus producing a pneumothorax.

The after treatment consists of frequent aspiration of the cavity and injection of Dakin's solution, to liquify the thick pus; unless this is done the pus will not pass through the catheter. About every two hours would be a good interval, during the treatment. During the night about three times he thinks sufficient. The course of the catheter in the chest cavity is important. We must be sure that the catheter is in the chest cavity, and not between the two layers of the pleura. At times an x-ray might be useful to locate the instrument.

The treatment is ended when all symptoms have subsided, when the bacterial counts of the fluid shows it to be sterile and when the cavity is obliterated. This last is important. Complete expansion of the lung is verified by the x-ray: If the cavity is not obliterated the treatment is continued; if the pleura is thickened he injects a 12 per cent solution of sodium bromide, which casts a shadow and reveals the cavity. During convalescence the best hygienic care is given and breathing exercises with the Woulfe bottle are insisted on. Calisthenics to overcome the tendency to scoliosis are ordered, as well as plenty of fresh air and sunlight.

**OPERATIVE SHOCK.**—Fraser, J. J. A. M. A., Feb. 15, 1924, Page 923.

Fraser urges that operation in a case showing persistent low blood pressure should be delayed, if possible, until means have been taken to raise the blood pressure. The operative procedure should be as short as is consistent with thoroughness. The operation should be carried out with the least possible interference and trauma, and every effort made to avoid unnecessary loss of blood. Chilling of the patient before, during, or after the operation must be avoided. If possible to exercise a choice of anesthetic, nitrous oxid and oxygen should be chosen. If simple restorative measures have failed to raise the blood pressure before operation, it ought to be raised by the intravenous infusion of human blood or 1 pint of 6 per cent. gum-acacia solution in physiologic sodium chlorid solution. If the examination of the blood shows that a condition of acidosis is present before operation, a reserve of alkali should be built up by the intravenous infusion of 1 pint of 4 per cent. solution of sodium bicarbonate.

**TREATMENT OF FRACTURED SKULL.**—Grant, Francis G. Surg. Clinics of N. A., Feb. 1924.

During the past ten years the tendency in the treatment of cranial traumas has been toward conservative measures, rather than immediate surgical interference. The high mortality following the rushing of patients to subtemporal decompression has produced a reaction, in favor of a more careful consideration of the indication for surgery in these cases. The surgeon must realize his limitations, since by surgical means we cannot restore the function of a damaged cerebral cortex, and what function does return in a pulped and lacerated brain does so spontaneously. He says our efforts should be directed toward improving the conditions under which recovery can take place. He divides cranial trauma into three groups:

1. Those cases that die no matter what is done.
2. Those that recover spontaneously without treatment.
3. The intermediate group that will die if untreated, but which may be saved by intelligent and timely interference.

Every attempt should be made to determine in which of these three classes the patient belongs. The bone injury is the least important feature, for a very extensive fracture of the vault may produce relatively few clinical symptoms, while a short split in the base invisible on the skiagram, may cause alarming symptoms from involvement of vital centers, thus making basal fractures so serious. He thinks that indications for surgery in these cases are two: To prevent infection and relieve the increased tension. Immediate operation is done where there are signs of increasing tension plus, sufficient neurologic signs to determine the area involved. He does not believe in operating until the shock has subsided enough to warrant operation. Tension alone without localizing signs does not require immediate surgery. In these cases he uses lumbar puncture, hyperonic solution by rectum and vein and ventricular tap after Keen. Subtemporal decompression is seldom performed in the first forty-eight hours, rather attention should be given to tiding the brain over the period of edema and swelling. He speaks of the "wet" and "dry" brain following

injury. In the former there is an increase in the cerebrospinal fluid which flows out when the dura is nicked, while in the latter cases no fluid escapes. If the skull is opened in this condition the brain matter is forced out so tightly, that no drainage could occur, and at times the brain is lacerated against the edges of the skull opening. In the west brain lumbar puncture and hypertonic solution will reduce the intracranial pressure. Every scalp wound needs attention to determine the presence of fracture, and for debridement and suture, and all depressed fractures should be raised. If cerebral fluid is escaping from the wound the dura should be sutured, as the best means to prevent infection.

Following is his routine in cranial cases.

On admission the pulse, respirations, temperature and blood pressure are obtained. If the systolic is below sixty or the temperature subnormal shock is considered to exist; the head is lowered, heat applied and 1-2 c.c. of pituitrin is given; any lacerations are cleaned and flooded with dichlorami-T and covered with steril gauze. A solution of 20 oz. of mag. sulph. in six ozs. of water is given into the rectum. Nothing more is done until the temperature is normal and the blood pressure has risen above sixty systolic; then x-ray plates are made—lacerations given proper attention and lumbar puncture made with careful manometer findings. He does not decompress for basal injuries but where definite localizing symptoms are present he feels that operation is indicated. In the absence of localizing signs he does not decompress, no matter how high the intracranial pressure, but instead uses lumbar puncture and hypertonic solutions. If the pulse and respiration rate continue to be depressed and the pulse pressure continues to rise, then he gives 100 c.c. of a 15 per cent salt solution at the rate of 2 c.c. a minute, into the vein. He lays great stress on the fact that it should be given slowly. If the stupor continues he taps the lateral ventricle through Keen's point. He reserves decompression for cases where there are definite localizing symptoms and believes that more can be accomplished by this method than by immediate surgery.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

#### **ON THE USE OF FORMALDEHYDE FOR THE PRESERVATION OF BLOOD SPECIMENS.—**

Bock, Joseph C. Marquette University Medical School, Milwaukee. (*Journal of Biological Chemistry*, February 1924).

The use of formaldehyde as a preservative for bloods intended for blood sugar determination by the revised Folin-Wu method was recommended by Denis and Aldrich. They use commercial "formalin," containing approximately forty per cent of formaldehyde, their procedure calling for the addition of one drop of the reagent to five ml. of blood.

The author in his series of experiments used six samples of formaldehyde obtained from various sources. He found that five out of the six samples of formaldehyde reacted with the alkaline copper tartrate, thus giving results above normal. The increase, expressed in terms of glucose, is

more than forty per cent in several cases. One sample had no appreciable influence.

His conclusion is that it seems inadvisable to use the average formaldehyde for the preservation of blood specimens intended for blood sugar determination.

#### **THE STAINING OF TREPONEMA PALLIDUM IN DRY SMEARS.—**Ruth Gilbert, M.D., and H. A. Bartels, B.S. *Journal of Lab. and Clin. Med.*, Jan. 1924.

Smears were secured from the testicles of syphilitic rabbits. *Treponema pallidum* was always proved to be present by means of the darkfield examination. These smears were divided into two sets. One set was fixed immediately by heat; the second set after an interval of four days, thus taking into consideration the time lost in transportation of specimens to the laboratory.

A total of 375 smears were made and examined to determine the relative value of twelve stains. One hundred fifteen smears were found positive by seven of the twelve methods. Sets of twenty-five smears were examined, and the following percentage of positives was found, after staining with each of the following methods: Fontana's method 80 per cent; Becker's method 60 per cent; Noguchi's method 44 per cent; Rosenberger and Fanz 28 per cent; and Lipp's method 24 percent.

The morphology of the *treponema pallidum* in the smears fixed after an interval of four days did not differ from that of the *treponema pallidum* in the smears which were fixed immediately.

#### **A STUDY OF KOLMER'S COMPLEMENT-FIXATION TEST FOR SYPHILIS.—**L. O. Dutton and Jess M. Thompson, Memphis. *Journal of Lab. & Clin. Med.*, Jan. 1924.

Samples of sera were divided and run simultaneously by the Kolmer quantitative technic and by the technic used by the Pathological Institute University of Tennessee.

Of the 501 tests run, the Kolmer technic gave 138 positives, 361 negative, and 2 anticomplementary reactions. The institute technic gave 144 positives, 351 negatives and 6 anticomplementary reactions. The Kolmer technic gave four positives on Institute negative cases, and the Institute test gave 8 positives on Kolmer negatives. The inference from this was that the Kolmer test is slightly more sensitive but less apt to give false positives than the Institute technic. Of the 138 positives by the Kolmer test, only 21 were less than clear cut four plus reactions, and of the 144 Institute positives 22 were less than four plus reactions.

#### **COAGULATION AND STERILIZATION OF LOEFFLER'S MEDIUM IN THE AUTOCLAVE.—**

Martin Dupray, Hutchinson, Kansas. (*Journal of Bacteriology*, March 1924).

The procedure of the author is carried out in the ordinary autoclave, without any special apparatus. The tubes of serum-broth mixtures are prepared as usual and placed in the autoclave in the proper slanting position. The door is closed, care being taken to avoid any leaks. The air escape valve is closed. The pressure is brought gradually to five pounds, without allowing the cold air in the autoclave to escape. The pressure is maintained at five pounds for two hours, during which time the temperature of the air in the autoclave rises gradually and the medium heats

up slowly enough to coagulate without bubbling or shrinking. At the end of two hours, increase the pressure gradually to ten pounds, at the same time opening the air escape valve slightly until steam appears, then closing it again. Hold at ten pounds for twenty to thirty minutes. Turn off the heat gradually and allow the pressure to come down to zero. It is essential that the cooling should not be rapid.

Fifteen pounds pressure may be used for final sterilization if desired. The higher pressure tends to make the surface of the medium a little friable and easily broken up by loop or swab, but does not appear to injure it in any other way.

It is essential that the air escape valve be closed during the first stage of heating, and that the autoclave shall not leak, otherwise the cold air escapes and the interior of the machine heats up too fast. The success of the method depends on trapping the cold air in the autoclave.

#### **BONE TUMORS—Dr. Fred G. Hodgson. Society Medical Journal, May 1924.**

The author emphasized the importance of making a complete and follow-up report on bone tumor cases and sending same to Committee appointed by American College of Surgeons for their review. He states that all cases of trauma to bones and joints should be x-rayed, even if no question of fracture arises, as a matter of record and in case the patient develops some pathological condition at the point of injury at a later date. Persistent pain near a joint is always suspicious of some definite pathology and must be carefully investigated.

Although Dr. Hodgson does not discuss the classification, symptoms or treatment of bone tumors, the three points that he brings up of complete reports, x-ray records, and cooperation with the Bone Tumor Committee of the College make the article worthwhile.

### **TUBERCULOSIS**

Edited by L. J. Moorman, M. D.

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#### **THE HEREDITARY FACTOR IN THE ETIOLOGY OF TUBERCULOSIS.—Albert Govaerts. The American Review of Tuberculosis, Sept. 22.**

In this study of 214 families, 185 tuberculous and 29 non-tuberculous matings were found. From this study it seems that 3 factors belong to the etiology of tuberculosis, (1) active factor or infection, (2) predispositional factor including acquired and genetic susceptibility, and (3) incidental factor.

The percentage of tuberculous offspring was found to be higher in the tuberculous matings. Tuberculosis is not an inheritable character in the sense in which eye color is, it belongs to the type known as indirect heredity. People inherit directly a constitutional make-up, with a certain power to resist tuberculosis.

While it is at present impossible to give advice to normal or apparently normal persons contemplating marriage, it will be useful to advise against it where the same defects are apparent in both stocks. More careful keeping of family records by each individual is desirable.

This study was made at the Eugenics Record Office, Cold Springs Harbor, Long Island, New York.

#### **EMPLOYING THE GRADUATE OF THE SANATORIUM.—F. E. Bachhuber. Journal of the Outdoor Life, Oct. 23.**

Working is a very serious problem for every ex-patient which must be worked out for him individually. The usual story is that the patient leaves the sanatorium apparently well, makes an easy start at work which continues about ten days. He looks fine, his employer has problems of his own and sees no reason for pampering him. So he is soon doing a full day's work with the result that he is back at the sanatorium in a month or six weeks.

This is discouraging, not only to the patient himself, but to the staff and worst of all to the other patients.

Wisconsin in an attempt to solve the problem, established a "hardening up" place, Tomahawk Lake Camp. This camp is doing wonderful work in controlling and gradually increasing the daily activities of ex-patients. However, there is no way of making a patient stay if he wishes to leave, as most of them do as soon as they can do three or four hours' work daily. The writer feels that ex-patients should be compensated for work done in the camp as an incentive to stay until really ready for normal life. He also feels that patients should be definitely committed to a sanatorium by the State, and stay until definitely discharged. This of course would be difficult of attainment.

The patient must realize that he is, to a certain extent, permanently, partially disabled and must arrange his life accordingly. For this reason it is necessary for him to follow some vocation which makes him his own boss. In this way only can he carry out the mode of living learned at the sanatorium.

#### **THE SIGNIFICANCE OF ROENTGENOGRAPHIC MUTATIONS OF THE LESIONS OF CHRONIC PULMONARY TUBERCULOSIS.—J. Burns Amberson. The American Review of Tuberculosis.**

There is great need for organization of present knowledge and orderly arrangement of facts concerning tuberculosis. Autopsy findings are very important but it is hard to correlate these findings with the long drawn out course of the disease. Close study of the living is necessary to link changes in tissues with symptoms. X-ray in connection with ordinary physical examination is a very valuable help in determining structural changes. Diagnosis of activity should not be made from a single plate, but a careful study of serial plates will give an insight into gross changes otherwise impossible in the living subject.

"Mottling" is probably the earliest change, it may be discrete or confluent and may be interspersed with other shadows interpreted as calcification, fibrosis, pleurisy, emphysema, cavitation, pneumothorax or other changes. This mottling or perifocal haziness is closely associated with the phenomenon of allergy, as a rule the greater the perifocal haziness the sicker the patient. As mottling advances there is a tendency to coalescence indicating increasing consolidation and perhaps cessation and to rarification, implying colliquative

necrosis and cavitation. A subsequent merging of these rarified spaces results in the development of larger cavities.

When healing begins it can be traced with even greater satisfaction in serial x-ray plates. Clearing of mottling is the first step followed by delicate tracing of fibrosis and gradually the residual conglomerate tubercle emerges. The time required for this varies greatly. The process is usually slow and may last thruout the life of the patient. Destructive processes may supervene at any time and are usually much more rapid than those of repair.

There is undoubtedly a constant relationship between the intensity of focal reaction and general toxemia. These changes, often very slight, with their accompanying chain of symptoms frequently very vague, may be studied and often anticipated with surprising accuracy by the use of serial roentgenograms.

This is intended to emphasize the use of serial roentgenography, not as a detached or self sufficient procedure, but as a valuable supplemental means of studying the anatomic changes and the immediate or remote effects of such changes in pulmonary tuberculosis.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
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ORTHOPEDIC PRINCIPLES, FROM "KEITH'S MENDERS OF THE MAIMED."—No. 1. Marshall Hall, 1790-1857.

Hilton, Hunter, Thomas, and Little, were all aware that deformities were produced by a disordered action of the muscles, but of the nature of that disorder they had no clear conception because they had a very imperfect picture of the elaborate machinery of nerve cells and nerve fibres which controls and co-ordinates the workings of the muscular system.

Marshal Hall thrust his theory of reflex action on the jealous and skeptical medical public of London in 1832. Charles Bell had previously shown that every muscle was supplied with two sets of nerve fibres, one to link the brain to the muscles and the other to link the muscles to the brain, and he conceived that all the active machinery of the central nervous system was situated in the brain itself and that the spinal cord was a mere annex used for the purpose of transit. However, Hall demonstrated conclusively that the cord was in reality a wonderful mechanism for regulating the behavior and action of muscles. He demonstrated the existence of the reflex arc and recognized that a stimulus was necessary to produce the reflex muscular act. He did not know there were actually nerve cells responsible as the microscope demonstrated this was a fact years later. He concluded that the spinal cord, regulated the balance which exists between various groups of muscles in a limb, that it gave each muscle its appropriate degree of tone, and that passive contracture of muscles which can work such dire deformities in diseased joints was to be traced to a disordered function of the spinal cord.

### 2. A REPORT OF FIFTY-NINE CASES OF SCOLIOSIS TEATED BY THE FUSION OPERATION.—Russell A. Hibbs, M.D., New York Journal, Bone and Joint Surgery, Jan. 1924.

The period of time which had elapsed since operation in the most recent cases was three and one half, and in the oldest, nine years, the average being six years and three months. The ages of the patients varied from three to twenty years, all of the patients who did not give a positive history of infantile paralysis showed evidence of having had the disease previously.

The first nine cases had very little correction of deformity before operation, while in the remaining cases a very definite attempt was made to correct deformity to the greatest possible degree before operation.

The operation consists of a maceration or fusion of the spinous processes of the vertebrae so as to produce an ankylosis in this area. No immediate post-operative support is applied but at the end of two weeks a final traction jacket is applied and worn for six weeks in bed. A removable jacket is then worn for twelve months. In all but one case, the patients have shown conspicuous relief from fatigue and improvement in general condition. Seventeen were unable to sit or stand before operation. Forty-eight percent of end results were considered excellent, that is, carriage and posture were practically normal. Good results were obtained in thirty-five percent. In these the paralytic involvement was greater. In eight percent the results were fair, there being other extensive paralytic muscles.

His conclusions are: 1. The study of these cases gives evidence that we have in fusion a means of preventing the progress of deformity of scoliosis in cases in which it is caused by muscle imbalance. 2. That the operation should be done before gross deformity has developed, it being easier to prevent than to correct deformity. 3. That after fusion the upright posture is maintained with greater ease and trunk movement exercises with less fatigue.

### 3. A CASE OF SNAPPING SHOULDER.—W. Rowley Bristow, London, England. Journal of Bone & Joint Surgery, Jan. 1924.

The disability in a lady of thirty-one years consisted in an inability to use the arm freely in the adduction position, as she frequently experienced a painful snap in the shoulder on this motion. Pain always followed which lasted twenty-four hours. X-ray and examination were negative, but at operation it was found that a fleshy muscle was riding over the lesser tuberosity and part of the muscle removed also a strip of the tendon of the short head of the biceps to which it was attached. It was found, upon investigation, that this muscle was an abnormal one, occurring in about one in twenty bodies in the dissection room. It is the rotation humeri, and is constant in mammals. The patient was entirely relieved.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

**THE TREATMENT OF CARCINOMA OF THE ESOPHAGUS WITH RADIUM.—Carmody, T. E. Laryngoscope, 1924, xxxiv, 102.**

The author thinks that the roentgen-ray should be used in connection with radium in the treatment of carcinoma of the esophagus as the ray has the advantage of penetrating farther than radium.

The method of treatment with radium depends upon the operator. The application of radium has been made directly to the growth from within, either by placing under direct vision through the esophagoscope, by means of a stylet of wire or rubber tube, by allowing the patient to swallow tube with thread or flexible wire attached and by use of Vinson's apparatus with bougie above and below tube.

The author reports a case in which radium has been used to good advantage. The last two treatments were given by use of the Vinson apparatus.

**THE ETIOLOGY OF IRITIS.—Irons, E. E., and Brown, E. V. L. J. A. M. A., 1923, lxxxi, 1770.**

The authors make a report upon the second series of 100 cases of iritis. These were studied in the same manner as the first series reported in 1916. Tonsillar infection was found to be the most common cause with combined infections second, and syphilis third.

There were fewer cases in which syphilis was a factor than in the first series, probably due to the source from which the material was drawn, and for the same reason gonococcal infections were less numerous. Tonsillar infection was more frequent than in the first series. Dental infections were common but the authors believe that the alveolar abscess is secondary to tonsillar infection. There were fifteen cases of sinus infection but in only one was this condition the cause of the iritis. Tuberculosis was present in eight cases but not regarded as a causative factor of the iritis. The average age was 35 years, the youngest patient was 13 and the oldest 69.

Following the removal of infected tissue there may be steady improvement and ultimate recovery without recurrence of the iritis. In other cases the removal of such tissue is followed by more striking and sudden improvement within from twenty-four to forty-eight hours. This may be permanent or followed in a few days by a recurrence. The immediate improvement is very similar to the startling but often temporary improvement occurring in arthritis and in iritis following the intravenous injection of a foreign protein; it is probably not-specific and may be misleading with regard to the cause of the condition.

**SIXTH NERVE PARALYSIS IN ACUTE OTITIS MEDIA AND ITS COMPLICATIONS.—Dupuy, H. South. M. J. 1924, xvii, 213.**

The author calls attention to the fact that it is not generally appreciated that the sixth cranial nerve can be isolatedly involved in suppurative inflammation of the middle ear, mastoid cells, and temporosphenoidal lobe.

A case of sixth nerve involvement originating from a different pathogenic cause which is not stressed sufficiently by Gradenigo is reported by the author. It is not transmitted along the same anatomical pathway as the Gradenigo type.

The case reported was in a boy twelve years of age who developed an acute otitis media which ruptured one week later and was followed by a profuse otorrhea. Three weeks after a mastoidectomy was performed and the patient was dismissed from the service as the wound healed nicely about three weeks after operation. The patient was re-admitted two days after his discharge with intense hemicrania, droopiness, nausea and vomiting. The urine showed a few hyaline and granular casts. The white blood count was 13,650. Two days later he was semicomatose and had slight convulsive movements. His pulse continued slow. A craniotomy the same afternoon exposed the brain over the tegmen antri and tympani. The dura over the whole temporo-sphenoidal lobe appeared healthy with not the slightest sign of a stalk. An incision in the direction of the apex of the petrous bone, inwardly and anteriorly, brought forth a gush of foul pus with an excessive amount of hemorrhage. About two and one-half ounces of pus were evacuated from the abscess cavity. The hemorrhage was controlled by packing the cavity with gauze strips. The patient regained consciousness before leaving the operating room. The next morning his mental state was excellent and the pulse oscillated between 52 and 80. The packs were removed on the second day and the patient gradually recovered. The infection was of staphylococci origin.

**SOME PRACTICAL POINTS IN THE PROGRESS OF MASTOID SURGERY.—Dutrow, H. V. Laryngoscope, 1924, xxxiv, 115.**

The author calls attention to the rapid strides made in mastoid surgery during the past three decades. It is no longer a dreaded operation by the surgeon or patient and the high mortality rate has been lowered.

The diagnosis of an acute mastoid is as a rule easy. The advancement of laboratory methods and the perfection of the steroscope in the study of x-ray plates are of great value in the diagnosis.

The incision should be from three to five millimeters posterior to the junction of the auricle with the scalp and should conform to its degree of curvature. The periosteum should be carefully preserved as it aids in the formation of new bone. The upper two thirds of the wound is closed with interrupted silk worm gut sutures and the lower third is allowed to remain open for the removal of the packing.

The author considers the recent suggestions made by Barany relative to closing the aditus by means of fibrous tissue is practical and should be considered as a method full of merit. If this

method is adopted in this country it will be the means of obtaining dry ears without the usual elaborate plastic methods which frequently fail to materialize.

The transfusion of whole blood to supplement the patient's resistance will save many lives.

Early recognition of the degree of middle ear and mastoid involvement with rational surgical treatment will result in a low mortality rate and the preservation of hearing.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

#### **PNEUMONIA SIMULATING APPENDICITIS IN CHILDREN.—Paul A. White, J. A. M. A., March 1, 1924.**

Attention is called to the ease with which an early pneumonia may be mistaken for appendicitis in children. In the former there may be abdominal pain, tenderness, and rigidity with vomiting while the lungs may seem quite clear. A severe chill, an early high temperature and a high leucocyte count are always indicative of a pneumonia rather than appendicitis. In appendicitis a chill is rare. The temperature in pneumonia rapidly rises to 103 or 104 while in appendicitis the rise is gradual, it seldom reaching as high as 103 or 104. In appendicitis the leucocyte count is seldom as high as 20,000, being more commonly around 12,000 or 15,000. In pneumonia it is usually 20,000 or more.

#### **COLITIS—A PEDIATRIC PROBLEM AND A CHALLENGE.—Harvey P. Barrett, Archives of Pediatrics, Feb. 1924.**

The diarrheas of children, especially those occurring during the summer, have been given a great many different names. Some of the most commonly used of these are summer complaint, summer diarrhea, cholera infantum, colitis, infectious diarrhea, etc. In spite of the fact that there undoubtedly exists several different disease entities, very little has been done towards classifying them. Of the bloody diarrheas or dysenteries the etiology has been quite well established. Different investigators have found the bacillus dysenteriae present in from 40 to 100 percent of these cases. It has been found to be absent in the other classes of diarrheas and in healthy children.

The symptoms of this condition are: Sudden onset, anorexia, frequent vomiting, often convulsions, high fever, loose watery stools, with later mucus and blood. The fever lasts from one to several weeks. Thousands of children die from this condition each year, and yet the reports do not mention bacillary dysentery. They should all be reported as bacillary dysentery and treated as such.

This disease is carried by flies, just as is typhoid fever. It is, also, largely a contact infection.

The greatest need of the present seems to be: (1) A systematic bacteriological examination of single specimens from cases of blood dysentery in a number of localities throughout the South, to determine definitely the degree of prevalence.

(2) The assembling, in a small colitis hospital unit, of cases diagnosed clinically as colitis, from all over the South, for the purpose of studying them bacteriologically from day to day. (3) Systematic study of epidemiology of the disease. (4) Working out of various methods of prevention, especially vaccination against the disease.

#### **RHEUMATISM: ITS MANIFESTATIONS IN CHILDHOOD TODAY.—Eugenia Ingerman and Mary G. Wilson, J. A. M. A., March 8, 1924.**

The interesting observation is brought out that 76 per cent of eighty-eight cases have been followed by recurrence of rheumatic manifestations in from one to eleven years after tonsillectomy. The term rheumatic manifestations refers to such conditions as sore throat, growing and joint pains, rheumatic fever, chorea, and cardiac involvement. In a control group of ninety-seven cases without tonsillectomy, studied over a similar period of time, 80 per cent showed recurrence of rheumatic manifestations. Of eighteen cases with incomplete tonsillectomy, 78 per cent were followed by recurrence of rheumatic manifestations. All of these findings suggest a consideration of other less mentioned sources of infection. Preceding definite signs of cardiac failure by from two to six weeks, loss of weight was observed with slight daily rise in temperature, increased pulse rate, fatigue, and diminishing exercise tolerance and vital capacity. An active tracheobronchial adenitis, associated with a carditis, occurred in three cases of the series.

Rheumatic nodules were observed in 11 per cent of the cases. Five instances occurred in patients with potential cardiac disease. The general progress in preventive medicine and hygiene in the last twenty-five years has not seemed to influence the clinical course of rheumatism as we see it today.

#### **A CASE OF HYDROCEPHALUS TREATED BY MEDICAL MEANS.—W. McKim Marriott, Proceedings of the Washington University Medical Society, Dec. 10, 1923.**

A five-months' old baby gave a history of a progressive enlargement of the head following an acute febrile disturbance. The maximum circumference of the head was 44.5 c.m. It was determined that there was no obstruction to the flow of cerebro-spinal fluid from the ventricles. Four months later the head measured 51 c.m. and the fontanel was very tense. The nutritional condition was bad. Theobromin sodium salicylate (diuretin) was given in doses of three grains three times daily for five weeks. At the end of this period the circumference of the head was 50.5 c.m.—showing an actual decrease. The treatment was stopped for ten days at the end of which time the head measured 51.75 c.m. The fontanel became more tense and the condition became bad. Treatment was to be resumed.

A number of cases of communicating hydrocephalus have been treated in this way with good results. It is based upon the fact that the surface tension of the blood is raised by the drug, causing passage of the spinal fluid into the circulatory system. No effect was obtained in one case of complete obstructive hydrocephalus.

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# THE JOURNAL

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### SYMPOSIUM ON PELVIC CANCER\*

#### SIGNS AND SYMPTOMS OF CANCER OF THE UTERUS PRECEDING OR FOLLOWING DEVELOPMENT

J. S. HARTFORD, M.D.  
OKLAHOMA CITY

The recent educational campaign concerning cancer has fallen far short of its expected result, especially in uterine cancer. A close review of cases, coming into University Hospital during the last two years, shows first, that, the laity fail to appreciate or understand the early signs and symptoms of cancer; and second, that the physicians, themselves do not recognize this condition until patients are beyond the stage of successful treatment.

There has come into the gynecological clinic of University Hospital, during the last two years case after case of inoperable, untreatable, cancer of the uterus that has been unrecognized by the family physician though under his observation for a period of from three months to one year. We have attempted palliative treatment in some of these cases, but many of them have been returned to their homes without treatment and without hope.

In the study of this series of cases we have tried by close questioning, to elicit a reason for this state of affairs and we find the following answers stand out most prominently.

First: The almost universal belief, that near or during the period of menopause that it is usual, and of no significance for a woman to bleed irregularly, intermittently or profusely: Consequently, they do not consult their family physician or if they do consult him do not permit a thorough examination. This neglect is directly traceable to the woman herself, and her negligence results in her failing to receive proper attention during the best period for successful treatment.

Second: Fear is a factor, causing many

women not to apply for treatment. They know that if they have cancer, they must be treated, and that this operation or treatment is a serious one, depriving them of their organs or bringing about certain changes which every woman is anxious to avoid.

Third: In many instances those cases that apply to the physician are not recognized by him as malignancies, or potential malignancies, but usually treated as simple hemorrhagic endometritis, as hyperactivities of the ovaries or endocervicitis.

I find the type of cancer beginning at the vaginal and cervical margin are most often recognized, while the adenoma carcinoma beginning in the cervical canal or fundus are not recognized until late.

The first causes must be remedied by knowledge gained through the lay press, through the women's club, and from personal contact through the more intelligent women.

The second may be counteracted by giving out the knowledge that the best results are obtained by early treatment, and that the less severe the case the lower the mortality, and last that the ill effects of the operation or treatment are overdrawn, as it comes at the time near the change of life when nervous and physical changes may come regardless of treatment. We have been surprised many times how difficult it is to persuade some women to submit to surgery when it may be their only help.

As to the third cause, the failure of the physician to recognize the early signs and symptoms of cancer. I cannot understand this, as I believe there is no physician of good standing but who knows, and could recognize these symptoms if they were not neglectful in their study and examination of each individual case. I am certain the blame with the physician must be placed to neglect, and carelessness in examination, rather than the lack of knowledge of signs and symptoms.

This is well illustrated in a case brought to my clinic last summer, in which the following conversation took place: "Mother, what was the first sign you had of trouble?" "I had a vaginal discharge that was not common to me." "When did you consult a physician?"

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

"Right away." "What kind of treatment did he give you?" "He gave me some medicine to take." "How long after you consulted the physician before you was examined?" "Six months." "What did the doctor tell you was wrong with you, when he examined you?" "He said I had inoperable cancer of the womb." This is a typical history that we get from many women; showing neglect of examination rather than lack of knowledge on the part of the physician.

This paper is being read for the express purpose of emphasizing the importance of early signs and symptoms of cancer of the uterus; that usually show up, just preceding or following forty years of age and the absolute necessity of making a digital, instrumental and general examination.

The early signs of uterine cancer are so plain that we cannot help but recognize them. The vaginal discharge, watery, thin, not pus, not blood, which is not common to the patient. The marked, scarred or lacerated cervix with thickened and everted edges; the elongated, thickened, hypertrophied cervix not the seat of active inflammation, the blood oozing of the canal from the touch of the applicator.

The hypertrophied uterus when atrophy should be taking place. The thickened endometrium. The spotting of blood following examination, during intercourse or following a vaginal douche. This drop of blood may appear between menstrual periods independent of any irritation, later there may be an increase in the number of days of flow and the amount of flow, with irregular clearing up of flow accompanied by thick muco purulent discharge. These are the early signs and symptoms, and let me stress the point that there is no pain. This is a condition that women cannot understand, they claim, continually and persistently, that they cannot have signs of cancer without pain. They should be taught by any one having anything to do with the subject that pain is only present in later or last stages of the disease.

In older women who have successfully passed through the change of life, one, two, three or more years, and then return to a bloody flow are almost always malignancies and should be considered so, until proven otherwise.

Our suspicions should be aroused and a careful examination should be given when young women who have not passed the change of life, and have had normal menstruation and clean genitalia, suddenly notice a vaginal discharge, increased and irregular menstrual periods without pain, without in-

fection, inflammation or history of abortion.

This brings us to the laboratory examinations and reports. With our desire to be fair to our patients and honest with ourselves, we have taught them, though they have all the above signs and symptoms that they must not be submitted to radium, x-ray or surgical treatment until the pathologist has passed upon a small portion of tissue taken from one angle of a cervix or a macerated portion of the endometrium, that is brought out by the curette. If no cancer cells are found we throw up our hands and wait until the pathologist says it is there, or until we can see it without our own eyes—then we try with all our energy and enthusiasm, radium, x-ray and surgery. Read the statistics, it is recorded that one woman in every eight to twelve, dies of cancer.

The skin men are the ones who have made the greatest progress in the treatment of cancer, and did you ever know one who was particularly enthusiastic about pathological reports? They may have reached a great truth that the time to deal with cancer is before it is cancer.

I believe in pathologists, I use them, but I do not believe when a woman of forty years of age or older, presents all the signs and symptoms of cancer of the uterus, as brought out by an accurate history, a careful general physical and local examination, that we should throw these things all aside and not treat her, just because a pathologist is not able to demonstrate in a small piece of tissue, cancer cells.

I have been asking and hoping that the pathologist will be able to find, and demonstrate a precancer stage in tissue, then they will be a great help in the cure of uterine conditions that lead up to cancer.

Until our knowledge, of the origin of malignant growths, demonstrates and proves that they do not originate at some local point and remain in a local point, for some time, we must insist on applying treatment to this point before, or immediately after, the origin of the disease.

I maintain that a pathological report on cancer of the cervix is of no value unless it is positive, and that in many cases it is not found until the growth is well advanced. A negative report of cervical tissue oftentimes seals the fate of a patient by giving them false confidence of non-malignancy. The pathological diagnosis of malignancy of fundus is more hopeful, as the disease can be successfully treated at a later date following

development, by surgery and deep x-ray therapy.

I believe the surgeon is not fair with the pathologist in cancer of the cervix, as he requests a diagnosis from a small piece of tissue, that pathologically speaking, may be far from the foci of malignancy.

In cancer of the cervix, if the patient be in the hands of a careful, well trained and conscientious surgeon, I believe preference over the pathologist's report should be given to the history, symptoms and physical findings.

It seems to me good practice to treat cases over forty years of age, that have chronic endocervicitis, lacerations of cervix with erosions, ulcerations, elongation and hypertrophies, with foul or tenacious discharge, pathological or unusual bleedings of the uterus, fibroids and uterine polyps, in a curative way having in mind at all times the possibility of malignant development.

#### PELVIC CANCER EXCLUSIVE OF CANCER OF THE FEMALE ORGANS

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##### CANCER OF THE RECTUM.

For many years it has been understood that cancer of the rectum constituted about three-fourths of all cancers of the intestinal tract. Abbe, quoted by DaCosta, says that rectal carcinomata constitutes three-fourths of all intestinal tumors. In speaking of pelvic cancer, therefore, one must, after excluding the female organs, think particularly of cancer of the rectum.

Notwithstanding its prevalence, there are many evidences that cancer of the rectum is overlooked with extreme and disastrous frequency. There is probably no other approachable area of the human body that is so uniformly neglected in the examination of patients as the rectum. The result is that rectal cancer is usually identified only after it has become an extremely formidable process.

In considering the danger signals that should call attention to the possibility of cancer of the rectum, one should remember that suspicious symptoms acquire relatively greater importance about the age of forty and thereafter; it being remembered that the disease may occur occasionally much earlier in life, there being cases reported as young as fourteen years. These are extremely excep-

tional, however, for most of the cases are found in patients around and after the age of forty.

One of the unfortunate things in connection with this disease is the tardy appearance of symptoms. This makes it all the more important to examine the rectum in the case of every patient who presents even slightly suspicious evidences of abnormality.

In the beginning, pain and other striking symptoms are not present in the usual case. The first symptoms depend upon an interference with function. In the developmental period there is infiltration and stiffening of the rectal walls, and as a result there is an interference with the normal and uniform expulsion of material. That is to say, there is irregularity of rectal function, such irregularity being characterized by constipation or diarrhea, and frequently by the expulsion of minimal amounts of material involuntarily, the involuntary escape of gas being often associated phenomenon.

These are some of the early danger signals which from a diagnostic point of view emphasize not only the necessity of an examination of the rectum but the necessity, also, of meticulous care in securing the history.

As the disease advances, there is ulceration and narrowing of the lumen, and then there may be blood in the irregular dejecta. Even in this stage it must be confessed that lightly and carelessly attributing the bloody dejecta to hemorrhoids is not an uncommon occurrence. This is frequently the conception that the patient has of his trouble, and the frequency with which the physician coincides with the preconceived notion of the patient emphasizes the necessity for more intelligent and painstaking procedure.

After cancer of the rectum has progressed to the stage when there is marked encroachment upon the lumen, extensive destruction of tissue, and the passage of not only blood but offensive debris, accompanied often by pain, tenesmus and ribbon stools, it is a late day to make an investigation of the condition.

Remembering then, the frequency of cancer of the rectum, the tardy appearance of symptoms, and the necessity of making an early diagnosis, let me urge more careful investigation in the presence of suspicious symptoms, be they ever so slight.

##### CANCER OF THE PROSTATE.

Unfortunately, cancer of the prostate does not present any early subjective symptom that is not present in benign hypertrophy of

the gland. I am now speaking particularly of carcinoma of the prostate. When, therefore, the patient complains of nocturnal thiamuria, especially if he is after forty years of age, the condition of the gland should be determined by rectal palpation. It is not always possible even then to be able to say whether or not the prostate is the site of a malignancy, but if woody hardness is present it should be considered a very highly suggestive condition. Irregularity of conformation emphasizes the suspicion, but it should be remembered, however, that woody hardness, even with a perfectly uniform conformation, usually points to malignancy, for while an irregular and nodular surface is frequently associated with a malignancy, the absence of such irregularity is not necessarily evidence that malignancy does not exist.

In carcinoma of the prostate, if the patient is to be permanently benefitted, the diagnosis must be made early in order that an early, radical operation may be performed. The drainage from the prostate is largely into the internal iliac lymph nodes, and if a diagnosis is not made before typical symptoms of advanced carcinoma are present, no procedure can be of service because there has already been a more or less extensive distribution of cancer cells.

It should not be forgotten that sarcomata may develop in and about the prostate gland. In unison with the history of the development of sarcomata generally, age is relatively an unimportant factor.

It has been pointed out that sarcoma usually involves the upper and posterior parts of the gland, and for that reason urinary disturbances are frequently absent in the early part of its development. The following case is fairly typical:

Mr. T., a white man, traveling insurance agent, age fifty, married, negative venereal history, entered University Hospital on the 31st day of March, 1924, on account of pain about the sacral region, perineum and lower abdomen, associated with some difficulty in emptying the bladder. He stated that he had been well until about six weeks before, when the above symptoms became manifest, and had rapidly increased in severity. His wife stated, however, that she had observed that he did not seem to be altogether well for two or three months. Within six weeks he had lost forty pounds in weight.

There was a firm, ovoid, symmetrical, smooth mass springing up from behind the symphysis pubis extending half way to the umbilicus. It occupied the mid portion of

the lower abdomen, shading off to either side. The transverse diameter was about five inches.

Rectal palpation revealed a very firm, smooth mass just above the sphincter, and bulging backwards into the rectum, pressing the latter against the posterior pelvic wall. The mass extended laterally on both sides, so far that the limits could not be reached with the palpating finger. It rounded upwards behind, and this surface presented irregular areas which seemed to be divided by ridges running in a vertical direction.

Notwithstanding the presence of such an enormous tumor completely encircling the base of the bladder and posterior urethra, the patient was able to retain urine for six or eight hours, and was able to void while in hospital, the act being accompanied by some pain and tenesmus. It was observed that when he was given morphine he ate and slept well, and voided without any considerable difficulty.

Dr. C. B. Taylor was kind enough to see this patient with me, but it was decided to not undertake a cystoscopic examination on account of the danger of injuring the urethra, which apparently traversed the neoplasm for a long distance.

The diagnosis was inoperable sarcoma, and he was advised to have deep x-ray therapy, which was administered under the direction of Dr. Roland. According to a message received from the patient, he has increased in weight and feels better. He has not been seen since he left the hospital on April 10th, and I am unable to describe the present condition of the neoplasm.

#### CANCER OF THE BLADDER.

I wish to say only a few words about cancer of the bladder, and to point out the necessity of early instrumental examination when there is interference with function, or when there are abnormal urinary findings that cannot be otherwise reasonably explained.

On account of the technical difficulties, a cystoscopic examination is not easily performed by every physician or surgeon, and there may be a temptation to defer securing accurate information on that account. However, when suspicious symptoms are present, and particularly in the presence of an unexplained hematuria, to defer securing such an examination is simply putting off the evil day, for the hour of disaster for that patient will inevitably come.

Malignant disease, especially sarcoma, may show itself in the connective tissue spaces in

and about the pelvis. The bony wall of the pelvis may be the site of a carcinoma due to metastasis from the intrapelvic organs or from some other more distant primary focus. In these cases there is usually interference with function, pain and distress, and when these symptoms are present it is highly important that the existence of cancer be borne in mind while seeking an explanation of the symptoms.

*Discussion:* DR. L. A. TURLEY, OKLAHOMA CITY.

Since one of the essayists has directly challenged the pathologists with regard to the accuracy and value of tissue work, and since all of the essayists have mentioned this same subject, I wish to say a few words concerning tissue examinations and their value.

There is no specialist in the medical field or in any other field that I know of, of whom there is more expected and with whom there is less cooperation than the pathologist. Would you think it would be possible for one to take a piece of Bologna sausage and tell whether it was made from dog, beef, or pork? Yet such is expected of the pathologist. Would any of you take a fragment of fried meat and by looking at it or even tasting it tell whether it was squirrel, rabbit or cat? Yet such is expected of the pathologist. Could you by merely hearing the footfall in the hallway tell the age, sex and clinical condition of the individual? Such things are expected of the pathologist. Material is sent in to the pathologist in any way, in any type, or kind of solution that happens to be at hand, or in no solution at all. I have received specimens sent in lysol, carbolic acid, perfume, and corn whiskey, and some of them in no solution whatever, simply a piece of dry tissue on a piece of gauze, and yet the individual sending in these specimens expects a report on the basis of which he could determine whether or not a radical operation was necessary. Specimens are sent in without a word as to the organ or sex of the individual from which it is taken, and without a particle of clinical history or anything else to guide the pathologist in even identifying the part of the body from which the section was taken, and the individual sending in this section probably not receiving a satisfactory report would condemn pathologists and tissue work. Of course the pathologist may be able to identify the tissue if the person taking the specimen had accidentally got enough normal tissue or the pathological processes were not so extensive as to destroy normal structures, but this is a pure gamble.

One of the essayists said that sections of

tissue for examination should be taken with a cautery. Why is the cautery used at all? It is because it burns and cooks the tissue, and any tissue so removed unless it be large enough to be beyond the range of the effect of the heat of the cautery will be practically destroyed so far as tissue examination is concerned, because the heat has destroyed the morphology and staining reaction of the cells. So let me warn you not to expect accurate diagnoses from small section removed by a cautery. The effect of trauma in causing metastasis depends not so much on the trauma itself as the type of trauma. The effect of massage in causing metastasis has already been mentioned, and the reason why such trauma induces metastasis is too plain for it to be necessary for me to take your time to explain it to you. The type of trauma which aids metastasis is manipulating, squeezing or bruising trauma. There is little or no evidence that the trauma of a clean incision with a sharp instrument will cause metastasis, so that you need not fear metastasis in taking specimens in this manner. Caulterize the wound afterwards if you want to make assurance doubly sure, but as I said before if you want an accurate tissue report do not take specimens with a cautery unless you take a large block, and even then you run the risk of destroying the very part which gives the keynote to the cause of the lesion. Another thing which often happens, even in hospitals, is that a surgeon casually remarks that he would like a tissue report on the material removed at operation and dismisses it with that until he asks for the examination. The important matter of getting this tissue in the best possible condition to the pathologist is left to the interest and industry of the nurse or maid who cleans the operating room, so that tissues are left some times for hours perhaps in the sunshine or in an open window with the air blowing across them before, as the last thing before leaving the operating room, the nurse takes the specimen to the laboratory. What accuracy of diagnosis can you expect from a piece of mummy? So that if you will consider the facts and factors surrounding tissue examinations you will find that the largest part of the unsatisfactory nature of tissue examinations is due to lack of cooperation on the part of the individual taking the specimen and in the meagerness of facts furnished the pathologist on which he has to base his opinion, or at least assist in the formation of his opinion.

Trained pathologists can tell you as exactly and minutely the condition of a piece of

tissue as one of you could tell the sex and race of an individual on whom you were performing a physical examination if he has the same opportunity. A negative pathological report does not mean that the patient does not have carcinoma for example, because the pathologist has no instrument with the vaunted delineating powers of an Abram's Electrometer, but it means that there is no carcinoma in the specimen furnished him, and if the surgeon is not satisfied with such a report, before he condemns the pathologist he should question whether or not he himself took the specimen from such a part of the lesion as would show its character. In such circumstances I have frequently asked the surgeon for a new specimen of tissue, frankly telling him that it did not appeal to me that the specimen furnished represented fairly the true condition. Furnish the pathologist with the information as to the organ from which the section is taken, with a bit of clinical history, giving the salient points; select your specimens carefully from such a part of the lesion as will show to the best advantage its true character; get it into his hand as soon as possible in the best condition possible. If there must be delay of hours or days, put it in 10 per cent formalin or 4 per cent formaldehyd. In other words, give him the same cooperation and opportunity to get fair data as you would ask for yourself in making a diagnosis, and you will be surprised at the increase in value, accuracy, and satisfactoriness of tissue reports. The ideal specimen for the pathologist should be from the periphery of the active part of the lesion including, if possible, some of the normal or more normal tissue and as much as possible the abnormal. Operating room personnel in hospitals should be instructed to see to it that the material of which tissue examinations were to be made should be gotten to the pathologist's hands as quickly as possible, within a few minutes after it is removed from the body, and not left for hours in the operating room as they usually are. In other words, cooperate with your pathologist, and he will render valuable service, and further let me state what has been stated by some of the essayists that a pathological report is not the sum total, but merely one factor in making a diagnosis. Surgeons are wont to rely too exclusively on pathology reports. And finally, the pathologist is a highly trained specialist. He is a consultant in your case and is entitled to all the consideration, rights, privileges and immunities of any other consultant.

## SURGICAL TREATMENT OF CANCER OF THE UTERUS

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The purpose of this article is not to describe in detail any special technique for the removal of a cancerous uterus; but rather to commend surgery for the results it has accomplished up to the present time.

In the year 1918, 11,967 women died of this murderous disease. Since that date it has been on the increase. I know you do tire of hearing and reading so much about this old subject. Perhaps you don't realize though, that some authorities state one woman in every twenty falls a victim to cancer. Therefore, we must work more diligently in the future to protect the lives of our womanhood. This is why I am making no apology for reading this symposium to you.

The results of surgery depend on two things: first an early diagnosis, second, an extensive operation and radical. I say, well and thoroughly done.

There are just two classes of cancerous uteri—operable and inoperable. May the time come when we will have just the one—operable. I mean that through publicity, education, propaganda and observation, both by doctor and layman, we can get these cases so early that complete cures can be made, by operating.

By a greater and better development in diagnosis and abdominal surgery. Grave's operable cases have risen from 10-15 per cent to 50 per cent; Wertheim's to 61 per cent; Bumm's to 90 per cent. Therefore you will see that it *can be done*.

As soon as the diagnosis of cancer is made—operate. It is here that your attention should be called to the fact that cancer of the body is not as dangerous as that of the cervix. The operation does not need to be nearly as extensive as in the cervical type—about 80 per cent get well. It is not so necessary to remove so much parametrial structure, nor such a large cuff from the vagina.

Regarding treatment of cervical cancer, a thorough examination is to be made. If there is any doubt whatever procure a good specimen for a paraffin section. If it is clinically evident, proceed at once. Some prefer to first curette away all loose friable tissue from the cervix. Others cauterize or remove a large cone shaped piece from the cervix—this is Freeman's plan. Again there are those who prefer to apply radium and five days

after go into the abdomen. Personally I like the plan of thoroughly cauterizing and proceed at once.

We are now on the brink—is it operable or inoperable, even after we have seen. Here let me remark as a preoperative point in diagnosis, that in the well advanced and dangerous type the uterus is more or less fixed as a result of the inflammatory tissues surrounding. An exploratory is advised if you are unable to decide.

After a careful survey of the pelvis—we must decide what style operation to do. Right here is the reason surgery is not universally recommended—why our cases have cancer return—just because we did not operate thoroughly. That is why Kroenig, Wertheim and many others have their wonderful results and records. We do not go far enough in our work. Can't you imagine the folly of removing a cancerous uterus the same as you do a hysterectomy for any other condition—and yet that is just what many are doing today. This is why their cases die in two years or before and never get as far as the five year period.

Reis certifies that he has some cases that are alive and well twenty-one and twenty-two years after he operated. He defies radium and x-ray to surpass that.

The technique of the Japanese Takayama is most wonderful and interesting and his statistics delightful. Some brilliant operators prefer the use of the cautery thruout. It most certainly has some advantages, but what I can't understand is how you can drive so far and safely into the tissues and know that all cancerous material has been removed. How can the ureters be separated from the posterior broad ligament peritoneum and all gland tissue removed—the dissection carried far up the blood vessels, etc? Isn't the sloughing which naturally follows an important consideration, when extensive work is being done. Isn't the knife, seissors or blunt dissection safer?

Schauta who devised a vaginal hysterectomy for carcinoma falls short of the records of Wertheim. In the case where lymph glands are palpably enlarged we must be radical. It was Wertheim who originated the plan of wide excision and it was universally taken up. He advised removing tissue far out in the parametrial structures, removal of all glands found, tying blood vessels far back, severing the round ligaments quite remote from the uterus, a large part of the vagina taken away, closing with or without vaginal drain.

Now when surgery is done like that we will most certainly have better results. We will not have to accept radium and x-ray as superior. However, they may yet develop more help to us. As yet they have not had the time nor experiences to demonstrate any superiority over surgery. When they can produce a 42.3 per cent record, for instance, as from Bonney's report that out of 100 cases operated, 40 have lived 5 and more years free from recurrence. Cobb reported in 1920 a series of 35 cases of radical hysterectomies with a 57 per cent five year cures.

Please understand that I do not think that radium and x-ray have no place in the treatment. It is most valuable as a follow up measures. Certainly every case should have deep rays applied following her operation and continued for some time. Radium is more advantageous in the early type of cancer—not in the deep involvements. There is too much uncertainty—difficult to regulate the dose, time and frequency.

Reis believes in surgery. Radium and x-ray records are too inadequate at the present time. They do not compare well with surgery. When they equal the work of Wertheim, Kroenig and the French, then it will be time to consider which is the better treatment.

There is one very important consideration when doing our pelvic work in cancer. That is the disposition of the ovaries. Leave them in or take them out—which? If we can and will forget the sentimental side and think only of the patient's life alone we will be rendering her a much greater service. Owing to the ease with which metastases occurs in this organ there is grave danger in permitting them to remain. Macroscopically they may appear normal, but in reality budding with cancer cells. Consequently with future danger in view, I believe it is good surgery to remove them along with the tubes.

Nothing particularly new has recently been added to the surgical technique in treating carcinoma of the uterus. This is only a plea for incipient recognition and prompt and radical surgical treatment. With the pendulum still swinging between the two styles of treatment—but with the lowest mortality, the longer lives given by the work of surgery, I am asking you to seriously consider your future choice of treatment in cancer of the uterus.

## RADIUM TREATMENT OF CANCER OF THE CERVIX

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The value of any therapy is determined after a careful study of the end results. In cancer of the cervix uteri, owing to its tendency to recur or metastasize for many years after treatment, observations must be made over a period of years.

The term 'cure' in cancer has been arbitrarily set at five years and, while not entirely true, serves as a guide to compare the relative merits of different methods of treatment.

Experience has demonstrated two general methods of treatment to be of value—surgery and radiation. In the surgical methods should be included operation, electro-coagulation and cautery; in radiation should be included x-rays and radium.

In order to discuss the treatment of this disease from the standpoint of the best method of procedure, cases should be classified under the following heads

- 1—Early localized.
- 2—Borderline.
- 3—Advanced.

An early localized cancer of the cervix is one in which the disease is limited entirely to the cervix. If the vaginal mucosa or the perimetral structures above the vaginal vault are encroached upon to the slightest extent, the disease is no longer localized. The old terminology describes such a lesion as "operable" and this term is still proper in the sense that such cases are in the operable class, but the term "early localized" is preferable as it permits more liberal interpretation of proper therapy.

Borderline cases will include those in which the disease encroaches slightly upon the vaginal mucosa or where there is a suggestion of involvement of the perimetral structures higher up.

Advanced cases are those in which the disease frankly involves either the vaginal mucosa or the perimetral structures.

It is a safe rule that cancer of the cervix is amenable to operative treatment if a simple hysterectomy will suffice to remove all of the growth. The wide pan-hysterectomy, popularized by Wertheim, has not proven

successful because of the high primary mortality and the small percentage of cases (35 per cent) suitable for operative treatment.

Operation, if confined to the first class, the "early localized" or "operable," results in five year "cures" in a goodly number of cases. The statistics compiled by the late Dr. Henry H. Janeway (1) show a wide range of end results, cures ranging from ten to sixty percent of the total number operated upon.

Equally good, if not better, results have been obtained by radiation alone, but most surgeons and radiologists are unwilling to give up operation in properly selected cases. In the light of present evidence either procedure is justifiable, but it is thought that a combination of radium and operation will produce more cures than either procedure alone. This view is held by Dr. Howard Kelly and the Memorial Hospital.

In many borderline or advanced cases, a combination of electro-coagulation or cautery followed by radium will eradicate the local lesion more quickly than radium treatment alone. This method requires an anesthetic however, and it is questionable if the end result is any better than when radium alone is used.

The results of operation in the borderline and advanced groups have been so disappointing that it has been practically abandoned in favor of radiation.

The published figures of Janeway (1), Duncan (2), Bailey & Healey (3), Schmitz (4), Doederlein (5), Opitz (6), Clark & Keene (7), Von Seuffert (8), Paris Radium Institute (9) furnish a comprehensive survey of the possibilities and limitations of radium treatment in this disease.

The early localized group shows five year "cures" in twenty to fifty percent; the borderline group fifteen to twenty-five percent and the most advanced group five to fifteen percent. All cases, except the most advanced or cachectic, are suitable for treatment either curative or palliative.

Figures are very unreliable, owing to the personal factor of the skill of the operator, differences in pathological reports, methods of classification, etc., but at least radium statistics are as reliable as surgical statistics. The accumulated evidence points to the fact that cancer of the cervix should always be treated by radiation except in the early localized case, where either treatment yields equally good results. Surgeons may take exception to this statement on the ground that no treatment is good treatment which does

not yield material for pathological study. This is a reasonable point and worthy of discussion. Surgical treatment permits of careful study of the entire tissue, yet it will be admitted that very few physicians are capable of properly interpreting microscopical tumor pathology. It is not intended to belittle the value of tissue study but the percentage of error, as it is done in the average hospital, is probably as great as in clinical observation alone. This is in no sense a reflection on the pathologist but indicates the difficulty of tissue diagnosis.

It is considered entirely proper to remove a section of tissue for microscopical study in every case where there is doubt of the diagnosis, whether the treatment is to be operative or radiative. This should be done very carefully, probably with the hot knife if surgery is contemplated, or at the time of treatment if radiation is the method of choice.

Tissue examination should do more than make the diagnosis of cancer; it should classify the tumor according to the degree of malignancy, based upon the cell type, fibrosis and hyalinization. These factors will aid greatly in making a prognosis.

Radiologists have been criticized for treating lesions of the cervix without making routine tissue examinations and an effort should be made to overcome this whenever there is the slightest doubt of the diagnosis. It is difficult to see where tissue section could be of value either in diagnosis or prognosis in advanced cases. It must not be forgotten that the interests of the patient are paramount to the interests of pure science and if no information of value can be gained by tissue section, such routine practice for the sole purpose of proving the diagnosis is probably taking unwarranted liberties with the patient.

It is not proven whether biopsy is a dangerous procedure or not, equally good authorities differ, but at least one can say that any unusual trauma to a malignant tumor is potentially dangerous. Ochsner (10) says that biopsy should be resorted to only when the diagnosis is in doubt. The question of trauma has been investigated experimentally in animals by Knox (11) who shows that very gentle massage of breast tumors in mice for a total of two to five minutes has been shown to set free numerous particles of tumor which form emboli in the lungs. Her conclusion is that, while this has not been proven in man, the importance of avoiding diagnostic or operative manipulation in man is obvious. Sistrunk and McCarty (12) state

that no ill effects have been noted in removing sections from breast tumors for diagnosis.

In this connection it is well to consider the proper method of examination of cancer of the cervix. Very frequently it happens that a patient is examined by three or four doctors before being referred for radium treatment. The family physician makes the first examination and possibly being in doubt as to the diagnosis, or fearing to tell the patient the truth without consultation, refers her to another physician. As a rule she is next sent to the surgeon who makes another examination. If the condition is inoperable, the patient is then referred to the radiologist who necessarily has to go thru the same procedure. Oftimes the patient will go to several physicians of her own accord to substantiate the diagnosis before she is willing to undergo treatment. Such practice should be condemned because rough or frequent handling of the cancer may break down nature's protective wall in the same manner that massage or squeezing a furuncle spreads the infection.

The examination of women suspected of having cancer of the cervix should be done very carefully. First, a digital examination is made of the vaginal vault and the cervix. Second, the finger is inserted into the rectum and the pelvis explored as high up as possible. Third, the vaginal speculum is inserted and the parts carefully inspected. The knee-chest position is very practical as the cervix can usually be inspected to good advantage with no trauma.

If a lesion of the cervix is found, the outer limits of the disease is determined. If the lesion is entirely confined to the cervix, the examination may be stopped until such time as it is practical to remove a section for microscopical diagnosis. Cervical erosion is sometimes difficult to differentiate from cervical cancer. Bowing (13) states that in cancer the line of demarkation between the lesion and the normal tissue is very sharply defined whereas in cervical erosion the lesion gradually fades off into the normal tissues. Superficial capillaries are quite prominent in cancer, at the edge of the lesion. In a fungating growth the diagnosis is rarely in doubt.

If the lesion is one in which radium is indicated, the position, size and direction of the cervical canal are noted so that the proper applicator may be made up ready for insertion.

The treatment is conducted with as little "fuss" as possible. The lower bowel is emptied by enema, the bladder emptied and a sodium bicarbonate, vaginal douche given.

The patient is put in the position best suited to expose the lesion, either the knee-chest or the dorsal, and the radium applicator placed. It is desirable to insert the radium into the cervical canal but if this is productive of too much trauma, it may be packed against the cervix. The vaginal vault is then packed to push the bladder and rectum as far away from the radium as possible. During the treatment the bladder should be emptied at least every four hours; the horizontal position and the large vaginal pack will necessitate the use of the catheter in many cases.

The dosage may vary from 2000 to 5000 milligram hours, depending upon the extent of the lesion, the location and type of applicator and the size of the vagina. The radium should be well filtered thru at least one millimeter of copper, silver, or lead, plus rubber catheter. Most operators use fifty to one hundred milligrams of radium, the amount makes no particular difference in the result. It is well to deliver the entire dose as soon as possible, probably within one week, making not more than three applications in all.

The radium treatment is supplemented with x-ray treatment which we shall not discuss except to say that either one alone should not be depended upon. The radium is applied for the destruction of the local lesion and the X-rays for the control of extensions into the perimetral structures.

The biological effect of radiation upon cancer was first thought to be due almost entirely to the destructive action of the rays upon the cancer cells. It has been shown by Ewing (14), Opitz (6), Schmitz (15), Nakahara (16), Caspari (17), and others, that this is not the only effect, in fact it is probably no more important than the tissue reaction in the normal tissues surrounding the tumor.

This effect is manifested morphologically by a series of inflammatory changes, not only in the tumor itself, but in the surrounding normal tissues. Following the radiation there is seen a hyperchromatism of the nucleus of the tumor cell; a granular degeneration of the entire cell; vacuolization and atrophy. Some of the more superficial cells near the radium applicator undergo necrosis but the bulk of the tumor shows all stages of atrophic degeneration.

The tissues are infiltrated with leucocytes, lymphocytes and plasma cells. There is a marked proliferation of new capillaries throughout the tumor which surround, choke out, isolate or mechanically extrude the tumor cells. The normal vascular supply of the

tumor is disarranged, the endothelium showing cloudy swelling, fibrosis and endarteritis obliterans.

This slow destructive process followed by infiltration of the parts with fibrous and hyalin tissue results in regression or disappearance of the tumor. Nature's protective wall, fibrous and hyalin tissue, is greatly reinforced which is conducive to increased localized resistance to further extension of the disease.

When this normal tissue reaction is absent or limited there will be very little beneficial effect noted from the radiation treatment. Factors which limit the tissue reaction are great loss of weight, marked anemia, toxemia, or some serious organic disease complicating the situation. The general physical condition of the patient should always be considered when making a prognosis.

McCarty (18), Sistrunk & McCarty (12) and Ewing (14) have shown that the type of lesion is very important. The amount of natural tissue resistance in the tumor is manifested by a varying amount of lymphocytic infiltration, fibrosis and hyalinization. These are natural barriers against extension of the tumor and their presence improves the prognosis a great deal. The most important factor, however, is the type of cell; the rate of growth and degree of malignancy being in indirect ratio to the degree of cell differentiation.

The extent of the growth will of course determine the prognosis more than any other factor. It is quite obvious that a small localized cancer of the cervix will be more amenable to treatment than one that has invaded the perimetral structures. Many cases are so far advanced that they are incurable by any type of treatment yet devised, but the palliation of symptoms, such as pain, hemorrhage, odor, loss of weight and strength, fully warrants the radium treatment.

#### SUMMARY

1. There are two general methods of treatment of cancer of the cervix, operation and radiation.
2. The choice of treatment depends upon the extent of the disease. An early localized lesion is equally well treated by operation or radiation. A combination of both methods probably is the best. A borderline or advanced case should be treated exclusively by radiation, occasionally electro-coagulation or cautery is advisable.
3. Biopsy should be done in every case where the diagnosis is in doubt or where it will assist in making a prognosis.

4. Pelvic examinations should be conducted as carefully as possible and any undue trauma avoided. Repeated examinations especially if carelessly done, may spread the disease.
5. Radium should be applied with simple preparation of the patient without undue trauma of the lesion.
6. Radium and X-ray treatment are both indicated in every case.
7. The tissue reaction is as important a factor in the production of good results as the direct destructive action of the rays upon the cancer cells.
8. Prognosis should be based upon the type and extent of the lesion, the age and physical condition of the patient.
9. Frankly incurable cases are practically always amenable to marked palliation of distressing symptoms.

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## X-RAY THERAPY—CARCINOMA OF THE UTERUS

ROBERT H. MILWEE, M.D.  
DALLAS, TEXAS

In the application of X-Ray Therapy, as treatment for carcinoma of the uterus, we are confronted with so many important biologic and physical problems, a thorough discussion of any one of which would task the patience of the reader, and since it is assumed that the general reader is more concerned with practical problems involved in ray treatment, a brief discussion of the subject will be attempted from a practical view point. I am giving you a brief resume of impressions gained from actual observation of cases treated.

## STATISTICS

Statistics as to cures by modern x-ray treatment of the malignant uterus are probably of not much value at the present time, because of the fact that sufficient time has not elapsed to allow a report on a large number of patients, three and five years following treatment, the present day method of treatment having only been in use about three years in this country. It is rather difficult to discuss x-ray treatment for carcinoma of the uterus without a very careful consideration of radium therapy, because best results are usually obtained by the employment of a combination of the two agents. Dr. Knappenberger has just preceded me with an able discussion of radium treatment for this condition so I shall not burden you with the subject of radium, other than what reference may be necessary in order to define the field of x-rays. It would be interesting to consider a complete history of the development of x-rays in the treatment of malignancy, but space will only permit a very brief mention of the more important developments.

The biologic effect of radium and x-rays, are probably identical, and the physical characteristics of the two agencies do not differ materially, and in their application, to the treatment of carcinoma of the uterus or elsewhere, it is largely a question of selecting that agent which is particularly applicable in the given case, or that agent with which we may secure proper radiation to a given pathological area with the least damage to the normal structures. Though x-rays were discovered some several years before radium, radium has been a more important agent in the treatment of carcinoma within the body cavities, until recent years, by reason of the

fact that in such situations, as malignancy of the cervix and uterus, better dosage could be secured than was possible with x-rays. Therefore, for years radium has played the more important part in malignancy of the cervix and uterus, but with the development of high voltage, or short wave length x-ray, x-rays which approximate the gamma ray of radium, in their penetration, we find x-rays playing a more important role in treatment of internal malignancy, generally.

X-ray treatment of malignancy of the uterus, should be confined to those cases in which the cervix is involved, except as a pre-operative and postoperative measure where malignancy involves the fundus only, and it is probably that carcinoma of the cervix is best treated by a combination of radium and x-rays, the radium being applied within the cervix and x-rays to the surrounding tissues from without. The great advancement which has been made in x-ray treatment of the malignant uterus, has been in the development of the more penetrating ray. For the past twenty years, we have been using x-rays for deep seated lesions, of comparatively longer wave length, or those produced by 100,000 volts. During the World War, certain European workers, notably, Fredreich, Sitz and Wintz began the use of a new, or more penetrating ray, generated by the employment of 200,000 volts or more. Soon after the close of the War, we received in this country reports of the very brilliant results of their treatment. During 1921, it was my pleasure to visit the clinics of these early workers and while I was convinced that results were being obtained, which we had never secured by other methods, it has required three years of careful consideration of the subject and a correlation of the work done by other American clinics, to formulate a very definite idea as to the real value of this new form of ray treatment. The application of this new method of radiation has probably increased the efficiency of radium treatment of carcinoma of the cervix, and may contribute to the improvement of surgical statistics where it is used in connection with surgery. The type of case in which we are best able to determine its efficiency by observation, is in the late, or inoperable cases. In such cases as were beyond the aid of radium or surgery, we have observed a number of such cases, completely recovered; the greater number of cases treated were improved; a few were apparently unchanged. Among that class which were apparently cured, about twenty per cent are now well, at the end of three years; of the second class, or that class which was merely benefitted, no patient is

well at the end of two years. The great benefit derived from treatment of this middle class of cases, seems to be that a large per cent of them, were made apparently well for a few months, or a year, and their death was not such a lingering one as ordinarily observed from this condition, but they died rather quietly, after the malignancy again became active. The few cases who did not seem to improve, did not exhibit marked ill effects from the treatment.

#### DOSAGE

Proper dosage has always been a very much discussed subject with radiation therapists. Some claim that the action of x-rays upon cancer cells is a direct one, and, therefore, a particular amount of x-ray should be applied for all malignant cells. Others claim that the death of malignant cells is brought about in an indirect manner, by the response of normal tissue to the action of the x-ray. There is abundant proof to indicate that the malignancy is destroyed by both the direct action and the effect on the normal tissues.

McCarthy of the Mayo Clinic has recently stated rather concisely that the normal fighting forces which combat the invasion of cancer tissue are increased in the following manner, by x-ray treatment.

1. Lymphocytic infiltration.
2. Fibrosis.
3. Hyalinization.

The work of Murphy of the Rockefeller Institute corroborates this statement in that Murphy finds local infiltration of leucocytosis following radiation therapy.

Observation of patients treated by radiation therapy indicate that the dose applied should be all that the normal tissue will tolerate without permanent injury, and should be given within a week's time from the starting of the treatment. Patients do not tolerate well repeated large doses. We also observe susceptibility of a given tumor cannot be determined by any one known method other than actual application of treatment, and this is most probably due to the variation in natural fighting forces of the host.

#### X-RAY IS PROBABLY NOT A CURE FOR MALIGNANCY

While modern therapy is a definite step forward in the treatment of uterine malignancy, curing some, and offering palliation in most cases unattainable by other methods of treatment, we do not believe that it definitely removes from the patient that condition that brought about the malignant growth. The observation of a large number of pa-

tients receiving radiation therapy and their general response to this agent, suggest that this form of therapy may lead to the discovery of the cause of malignant growths. Observation shows that patient receiving x-ray therapy for cancer of the pelvis most always gain in weight following the treatment; this is also a noticeable fact where treatment is administered for non-malignant pathology and frequently occurs even though the patient is well past the menopause. It is also noticeable that the degree of improvement of the malignant condition can be determined by the gain in weight.

Maude Slye of Chicago University, has shown that malignancy in mice is retarded or regresses with pregnancy. Loeb of Washington University has prevented the development of cancer in a family of cancer mice by castration. A careful study of the geographic distribution of certain diseases of unknown origin of the glands of internal secretions is of interest in this connection and shows that malignancy is general more prevalent where simple and toxic goiters are most abundant.

These facts well suggest that the exciting cause of cancer may be rather in some way due to a disturbance of internal secretions, and is probably the result of artificial living, since we find that man is the only animal where the female suffers more than the male from disturbances of internal secretions and malignancy. Scientific investigation has determined that in all other animals malignancy and disturbance of internal secretion is equal in the male and female. While man is the only animal where the female lives differently from the male, we find the female has more disturbances of glands of internal secretions and more malignancy.

This is not an attempt to bring to you a cure for cancer but it is hoped that these facts and observations may in some way assist you in the fight against one of the great enemies of the woman, cancer of the uterus.

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*Discussion by J. HUTCHINGS WHITE, MUSKOGEE.*

Too much emphasis cannot be placed upon

the importance of early diagnosis. Dr. Hartford points out in his paper the early signs of carcinoma of the uterus and while some of these signs may not mean carcinoma when present in a patient, that patient should be examined not once but often enough to satisfy the doctor what kind of trouble she has. It should be much more satisfactory to the patient, and I think they appreciate it, to be told that there is no cancer. Many cases of erosions of cervix under bland treatment will heal. When they do not heal promptly they are dangerous. One is not justifiable in removing sections for examination unless immediate operation is performed and then these sections should be removed with cautery.

Dr. Sackett's statistics of the percentage of operable cases of cancer and percentages of recovery. It seems to me that those surgeons are remarkably fortunate in discovering early growths or more than dexterous in handling such cases. Dr. Richardson at Massachusetts General Hospital, after fifty years' experience, said that nearly all of his cases of cancer, though some of them lived for years following operation, sooner or later died of cancer. An arbitrary period of five years' freedom does not mean cured.

Cancer which cannot be cured by surgery I believe is not curable by any other known means. If dissection cannot eradicate the growth neither radium or x-ray will cure it. My personal experience with radium and x-ray has been most unsatisfactory. These may prolong life. Is it fair to prolong a life of pain and suffering of a patient who anxiously looks forward to the coming of the night with sorrow and hoping that the morrow may bring surcease to his or her suffering by closing eyes in eternal sleep.

How are we to make an early diagnosis of cancer? Every paper in this symposium has laid emphasis on the way it may be accomplished: *Examination, re-examination and more thorough examination.*

## THE MEDICAL RESERVE CORPS IN OKLAHOMA\*

COL. L. S. WILLOUR, MED. O. R. C.  
MCALESTER

At this time there is a demand being made by the United States Government upon the Medical Profession, which I fear some of us are inclined to treat rather lightly and this apathy is due I believe to lack of study and knowledge of the subject.

In going over the National Defense Act of 1920 it is evident to the observer that its successful operation depends for the most part on the voluntary co-operation of our citizens. No one is drafted or compelled to join in the Military plan of preparedness and clearly it recognizes the principle that National Defense depends upon the citizens themselves and not on a standing army or any regularly employed force. Without the voluntary co-operation of our citizens in carrying out the provisions of the National Defense Act our Country would be left in a military sense practically wholly defenseless.

To the various branches of the service have been drawn men who are leaders in their respective lines of activity. In Oklahoma where is located the 95th Division, we find most of its component parts filled and officers attached above the quota, however, in the Medical Branch of the service there are now some openings for men who we feel should make application and accept their responsibility in the organization of this department of the Reserve Corps. There is an opening for men of this profession no matter what their special line of work may be, whether it be the general practitioner or the man filling the most technical position in our large medical Institutions. We have as Executive Officer Major Robt. B. Hill, who has the situation thoroughly in hand and can, I am sure, assign any applicant to not only the position he can best fill but to one which will appeal to the man assigned.

By the method of assignment which has

\*Read before the Surgical Section, General Session, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924

been adopted, we will be able to avoid wasting talent as was done during the World War, where we saw men of marked technical ability holding sick call for a bunch of negro stevedores or some other equally ridiculous, as well as tragic situation.

While I am particularly interested in filling the existing vacancies in the 320th Medical Regiment and the Medical personnel attached to the various combatant units of the 95th Division, I want to bring to your attention the necessity of filling our quota in the Branch Assignment Group. These assignments as you no doubt know, are from the Surgeon General's office and are to units outside of the Division.

There have been authorized by the Surgeon General many non-divisional organizations such as General Hospitals, Hospital Trains, Station Hospitals, Surgical Units, Evacuation Hospitals, etc., and it appears to me that, if some one would take sufficient interest, some of these organizations might be perfected within the State and we would thereby be doing our duty in filling up the non-divisional organizations.

Already we have one of these organizations perfected in General Hospital No. 56, under Lieut. Col. LeRoy Long. This is a unit composed of Reserve Officers from the University Medical School and are ready in an emergency to render the most efficient service.

Of the sixty-eight officers required to fill the 320th Medical Regiment, thirty-four have been assigned. We also still need twelve more Medical Officers for assignment to the line organizations. Now I can see no good reason why we should not fill our personnel before these members of our State Association leave Oklahoma City.

To meet this obligation which I feel has been put up squarely to the Doctors of this State, it is not necessary to make any sacrifice of either time or money, just your application in the hands of Major Hill will bring your commission without examination although you will be ordered before a board who will simply look into your qualifications as a legally practicing physician.

There is open to the Doctors who accept these commissions two methods of instruction; one a correspondence course and the other two weeks training at a summer training camp, both of which are optional but are recommended to those who feel sufficient interest to improve themselves in this branch of military service and receive promotion, however, the plan of promotion in the Medical Reserve Corps has been made definite and certain up to the grade of Lieutenant Colonel, in that the regulations prescribe that promotion to the next higher grade shall be accomplished every five years without examination. For the promotion to the grade of Lieutenant Colonel examination by a board is necessary and fitness for this grade must be demonstrated.

To those who now have commissions or who will make application I want to urge affiliation with the Reserve Officers Association.

The Officers Reserve Corps is a great pool of more than 80,000 of our ablest citizens, picked because of their patriotism and knowledge of matters of National Defense and because of their willingness and ability to help in this great plan. They are in the strictest sense the leaders of the patriotic citizens who will join when need comes in our National Defense.

As such they have two classes of obligations.

First; Military Obligations, such as to keep up and increase their own knowledge and skill in their particular line of military efficiency; by their fitness to command troops, or skill in some science as applied to warfare, or to arrange for the prompt production and furnishing of supplies and munitions, or to instruct others in these things.

Second; Civilian Obligations, such as to familiarize the people with the need for preparedness and what it means to them in the saving of lives and money, and perhaps even of our independence and institutions; and to explain the National Defense Act to them;

to support and help the Regular Army and the National Guard in their essential duties to carry out this plan of National Defense; to bring home to our representatives in the Government the needs for support to National Defense, not only in the way of the modest appropriations required to put this excellent and most economical plan of the National Defense Act into as full operation as possible, but also in helping to familiarize the people with this most important matter (for many of our public men have great personal power to bring such matters before the people); to encourage and assist in building up and getting men to enter R. O. T. C. and especially the C. M. T. C. training; and the formation of other means of training and instruction for ourselves and others such as the successful Camp Wadsworth held in New York last summer, also to recruit and build up the strength and membership of the Officer's Reserve Corps.

The Reserve Officers Association of the United States is an organization formed for just this purpose and for no other. Its sole object is to assist in the performance of the Civilian Obligations of the Reserve Officers of the United States. It is not partisan and is not self-seeking. It is not confined to veterans of the World War; on the contrary, every man who becomes an officer in the Reserve Corps is immediately eligible for membership in the Reserve Officers Association of the United States. It is not intended to die out with the veterans of the World War, but to go on with continuing vigor and activity constantly renewing its membership from the young men who each year join the Officers Reserve Corps.

In conclusion I want to congratulate Major Hill on the work he has done for the Medical Reserve Corps in Oklahoma, around such a man we can build a Medico-Military organization that will be second to none and I want to make a personal appeal to the loyal Doctor-Citizens of this State to do your full patriotic duty and give your undivided support to this program of preparedness.

# THE JOURNAL

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### EDITORIAL

#### BOTULISM—AN UNAPPRECIATED MENACE

During the World War, when slogans  
dinned the ear to "give 'till it hurts," "eat  
less meat, less wheat, more corn and vege-  
tables," thousands of our civic centers and  
householdery grew vegetables of all sorts.  
Home canning became a ritual, almost an  
obsession. Shortly, these activities were fol-  
lowed by unusual rises in the number of out-  
breaks of Botulism. Investigation warrants  
the inference that resultant morbidity and  
mortality was solely due to infection with  
b. Botulism traceable directly, and only, to im-  
proper, inefficient sterilization of the com-

monly used vegetable, beans, corn, carrots,  
etc.

To reduce fatalities hereafter to the mini-  
mum, physicians and health officers should  
know, and constantly warn of this danger  
and the simple means of prevention. The  
well known fact that the infection is unusually  
resistant to sterilization, ranking in obdura-  
cy with the most unmanageable of all—  
tetanus—must be understood. It should be  
advised that repeated sterilization from one  
to two hours daily, for three or more con-  
secutive days is necessary if the larger and  
gross vegetables most in use are to be rendered  
safe. It should accentuate the necessity and  
danger, if everyone were advised that ap-  
proximately 50 per cent of common garden  
or sweet corn on the cob is lost by  
highly efficient packing concerns and that  
this failure is due solely to two factors—the  
time clapsing between gathering and steriliz-  
ation and the large mass to be rendered ster-  
ile.

This matter is almost wholly one of pre-  
vention—for treatment after infection is fu-  
tile, as a rule. Every housewife thinks she is  
qualified to handle the simplicities of her  
kitchen. We know she is not. That the  
problem is one having attached intricate  
knowledge demanding the exactitude of the  
laboratory—with rigid observance of what  
they may term "foolishness" which, if neglec-  
ted, may have as aftermath tragedy, is too  
well known for comment.

#### Editorial Notes—Personal and General

DR. S. P. ROSS, Ada, has been appointed Chief  
Surgeon for the Oklahoma City and Atoka R. R.,  
with headquarters at Ada.

BECKHAM COUNTY MEDICAL SOCIETY met  
at Elk City last month and held a clinic. They  
were entertained by Dr. V. C. Tisdal.

DR. and MRS. R. W. WILLIAMS, Anadarko,  
returned last month from a month's vacation in  
the north, including a trip to Montreal.

MAYES COUNTY MEDICAL SOCIETY met at  
Pryor July 2, and transacted the usual business,  
after which they were entertained by Dr. J. L.  
Adams.

DR. T. R. PRESTON, and family, Wefleetka,  
autoed to their old home in eastern Kentucky, and  
will spend July and August visiting friends and  
relatives.

DR. and MRS. WILLIAM H. BAILEY, Pres-  
ident of the Oklahoma County Medical Assn., are  
spending the summer vacation at Denver, and will  
visit California.

DR. JOSEPH T. GUNTER, Ochelata, has removed to Wolco, Okla.

OKLAHOMA COUNTY MEDICAL ASSOCIATION enjoyed a picnic at Lincoln Park recently, followed by a swim in Northeast Lake. About one hundred persons attended.

DR. and MRS. H. T. BALLANTINE, Muskogee, are on an extensive trip through the Northwest and Canada. They will visit Yellowstone, Canadian Pacific points, Lake Louise, Banff and other western and Pacific points.

GARVIN COUNTY MEDICAL SOCIETY met and banquetted at Pauls Valley recently, a feature of the meeting being an address by Dr. Curt von Wedel, Oklahoma City, on Plastic Surgery, several clinical cases being presented.

DISTRICT No. 5, Oklahoma State Medical Association, held its annual meeting at Durant on July 8, addresses being delivered by Dr. J. S. Fulton, Atoka; Dr. C. Rosser, Dallas; Dr. Paul Gunby, Sherman, Dr. F. L. Watson, McAlester; Dr. C. C. Gardner, Atoka and Dr. John A. Haynie, Durant.

LICENSES of three Oklahoma physicians were revoked, and warning issued to a fourth, by the State Board of Medical Examiners, after a hearing on July 3. Licenses of Drs. Paul P. Oliver, Shawnee, W. G. Evans, Tulsa and H. P. Clark, Tulsa, were revoked, on the ground of "using advertising of an unprofessional nature and calculated to deceive the public." Mrs. Kathryn Van Leuven, assistant attorney general, was prosecutor.

LE FLORE, CARTER, PITTSBURG and MUSKOGEE COUNTIES, have accepted the cooperative plan for the establishment of model county health departments, and just as soon as arrangements are completed the work will be in operation. These counties will operate by the International Health Board of the Rockefeller Foundation and the Department of Public Health of Oklahoma, contributing \$5,000 annually to each, and these counties contributing at least a like amount.

DR. W. L. KENDALL, Enid, is back with his "old love," The Enid institution for Feeble Minded Children. It will be recalled that Dr. Kendall built this institution from a shoestring to one of the cleanest, most efficiently conducted of our State institutions, and received as his reward such disgusting and ungrateful treatment from incompetent political sources that he resigned. The State and the institution are to be congratulated on his return to their service.

STEPHENS COUNTY MEDICAL SOCIETY met with the Grady County Medical Society recently and the following program was given: "Infection of the Gall Bladder," Dr. W. H. Livermore; "Acute Sinusitis, with Case Report," Dr. U. C. Boon; "Syphilis," Dr. J. C. Ambrister; "Treatment of Diabetes," Dr. A. B. Leeds; "The Ultra Violet Rays," Dr. H. C. Antler. The meet-

ing was addressed by Dr. Carl Puckett, State Health Commissioner, to which the public was admitted, on "Public Health."

DR. D. T. BOWDEN, graduate and former instructor at Johns Hopkins University, has assumed his duties at Oklahoma City as assistant to Dr. Carl Puckett, State Health Commissioner. Dr. Bowden will be in charge of the full time county health unit work, there being now six counties in the state having this full time health work, four through the aid of the Rockefeller Foundation, and two through aid of the U. S. Public Health Service. In addition to Dr. Bowden, Dr. J. F. Mahoney, has been loaned to the state without cost, by the U. S. Public Health Service, who will direct the new department of communicable diseases and epidemiology.

#### DOCTOR PERCY A. SMITHE

Dr. P. A. Smithe, Enid, was drowned in Little River, near Nashoba while on a vacation trip July 21.

Dr. Smithe located at Wellston, Oklahoma in 1905 after which he located in Enid in 1907 where he has since lived.

Born in Lyndonville, N. Y., August 19, 1878, Dr. Smithe obtained his preliminary education at Lyndonville High School, receiving his A. B. degree from Cornell in 1903 and graduating in Medicine from the medical department of that institution in 1905.

In 1914 Dr. Smithe entered the Red Cross service being stationed in Vienna, Austria. But after entry of the United States in the war he returned to this country, shortly afterwards accepting a commission in the Medical Corps of the army, but the armistice coming was the cause of his seeing no service. Married to Miss Kathryn Roberts in September 1902, the union resulted in two children, a boy and a girl, the latter surviving, and is now twelve years of age. Interment was made in the Enid cemetery.

#### DOCTOR RICE M. SHAW

Dr. Rice M. Shaw died at Oklahoma City on June 30, 1924 of uremic poisoning. Dr. Rice was born at Sercy, Arkansas, on May 12, 1874, and was a graduate of Little Rock Medical College, of the class of 1899. Prior to his practice in Oklahoma City for the past four years, he lived at Alex, Oklahoma. He leaves a wife, Mrs. Myrtle Shaw, and a daughter, Miss Lila Shaw also one brother and one sister. Dr. Shaw was a member of the Oklahoma County Medical Association and of the state association and a Mason. Burial was at Fairlawn Cemetery under the auspices of Hiram Lodge A. F. & A. M. on July 1st 1924.

### DOCTOR J. ANGUS GILLIS

One of Frederick's best known and best beloved citizens, Dr. J. Angus Gillis, passed away at the University Hospital in Oklahoma City, on June 19, 1924, after an illness of several months of a mastoid affection, a surgical operation failing to give relief. Dr. Gillis was a pioneer resident of Frederick, and was always in the forefront of every movement for the betterment of the community, was prompt and faithful in the care of the sick, and had many friendships of a warm and lasting nature. He had served as Health Officer of Frederick and as County Superintendent of public health, and on the board of education.

As one of the most prominent Masons in the state, Dr. Gillis had held most of the high offices in the order, and had taken the highest degrees in both the Scottish and York rites of Masonry. During the World War, Dr. Gillis served his country, with the rank of Captain, in the medical branch.

He was president of the Tillman County Medical Society, and a member of the old Comanche Medical Association, and of the Oklahoma Territorial Medical Association. On his death, he was a member of his county and state organizations, and a Fellow of the American Medical Association.

Dr. Gillis was born at DeFuniac, Florida, March 10, 1866. He resided in Austin, Texas, during his early manhood, and began the practice of medicine near there, after his graduation in Medicine in 1895, from the University of Tennessee; he was active in his profession in Frederick since 1902. Dr. Gillis is survived by his wife and two children.

### *Abstracts. Observations from Current Medical Literature*

#### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

#### DELAYED TRAUMATIC ULNAR NERVE PARALYSIS. CLINICAL CASE REPORT.

Miss F. C., admitted December 27, 1923, age 16, white.

Came to the clinic because of a progressive disability of the right hand in which there was numbness in little and ring fingers and an inability to use these fingers normally.

**History:** Eleven years ago she fractured the right arm in the elbow joint. It healed all right but left a limitation of extension to about one-half that of normal. Six years ago she fractured the same elbow but it healed favorably and function was really improved. Eighteen months ago she injured the same elbow while pulling a rope and although the injury was not of serious nature, she at once noted numbness of little finger. She could feel things with it but it just felt numb. This feeling has never disappeared and the little and ring finger have gradually drawn so that they remain hyper-extended at the knuckle joints

and she cannot straighten them. About three months ago noticed that the muscles on the back of hand were wasting away and also the thenar eminence was getting less prominent.

**X-Ray:** X-ray of elbow reveals a fracture of the internal condyle of the right elbow with non-union.

**Elbow:** Examination—Internal condyle appears enlarged and feels abnormal in contour. Crepitus is obtained in this region and condyle is freely movable with ulnar action. There is no limitation of motion in elbow but strength is somewhat impaired.

**Hand:** Atrophy of interossei is marked, cannot spread ring and middle fingers, hyper extension at knuckle joints with flexion of phalangeal joints and cannot fully extend these two fingers without holding the knuckle joint fixed. The thenar eminence is plainly atrophic and there is partial loss of sensation over little finger and inner outer aspect of ring finger.

**Operation:** Elliptical incision from one and one-half inches below inner condyle to a like distance above inner condyle. Ulnar nerve was enlarged and bound tightly to the medial condyle for a distance of four inches. It was transplanted to the anterior inner aspect of the elbow.

#### NO. 1 A BASEBALL FINGER CURED BY OPERATION BY RICHMOND STEVENS, M.D., New York City. The Jour. of Bone and Joint Surgery, April 1924, page 469.

In glancing over various articles for selection as abstracts, the writer came across this unusual topic upon a very common deformity and recommends that the operation be tried. The author of the article recommends it for those cases where there is only tendon injury. He saw his case six weeks after injury and after three weeks' conservative treatment. The patient was seventeen years old, was hit by a baseball on the tip of the right middle finger, the finger became "crooked." A splint had been applied but the deformity persisted, which was a flexion of the distal inter-phalangeal joint of the right middle finger. The distal phalanx could be fully extended passably but not actively. The author made a diagnosis of a separation of the extensor tendon at its insertion into the last phalanx and this was confirmed by open operation. The tendon was pulled down to the point of insertion and fixed with kangaroo sutures. After four weeks of splinting and active movement, the finger gradually returned to normal.

#### NO. 2. FRACTURED SPINE: PRACTICAL CARE AND TREATMENT.—W. C. G. Kirschner, Surg., Gyn., and Obst., June, 1923, p. 830.

The author states that diagnosis and surgical treatment of this lesion have received much attention recently, but little has been said about many important details in the management of these often difficult and discouraging cases, especially those associated with extensive paralysis. He reports in detail a case of fracture and dislocation of the third and fourth lumbar vertebrae with paralysis of lower limbs and loss of control of bladder and rectum, with complications of decubitus, cellulitis, cystitis, impacted feces, etc. The details of nursing, the uses of plaster shell and cast, hammock suspension of limbs from Balkan frame, surgical care of bed sores, and other practical points are discussed. By extreme patience and care a favorable result was obtained in a

hopeless type of case.

**Results:** Two weeks after operation patient insisted there was strength returning to the fingers, but no change in areas of sensation to be detected. At the end of three months there was an increase in sensation over the lateral half of the ring finger. At the end of six months patient writes that the wasted areas are filling out; that movement is much better and highly elated over the general improvement which has taken place.

**Discussion:** This condition was described by Panas over forty years ago, and there are probably not more than one hundred cases on record of a distal ulnar neuritis or paralysis appearing a number of years after injury. It is thought that the above case referred to would entirely recover.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

**SOME PRACTICAL POINTS IN CONNECTION WITH THE WASSERMANN REACTION.**—By F. Green, M. D., Montreal, Canada. *Journal of Lab. & Clin. Med.*, May 1924.

At the present time we are unable to say why various agents and conditions will cause sera to give an anticomplementary reaction. The following are some of the factors which in a practical way come to the forefront in performing the Wassermann reaction.

**Antigen in high doses.** When titrating antigens the object is: 1, to find the special doses which in the presence of a known positive serum will give a definite positive complement fixation; 2 the same dose with normal serum must give complete hemolysis; 3 the extract by itself must also give complete hemolysis. Having found this dose we must also leave a margin to provide against absorption of a certain small amount of complement by the extract and by the serum of the patient. Extracts in high doses will give an anticomplementary action, so antigens should be titrated as often as possible and one-half the anticomplementary dose used.

**Sera Containing Fat.** Fat, as well as lipoid substances, in the serum may give a falsely positive Wassermann or an anticomplementary action. For this reason the blood should not be drawn just after a meal.

**Fat Solvents, Distilled Water and Iodine.** Alcohol, ether, chloroform, water and tincture of iodine, in the proportion with which they can reasonably come in contact with the blood in the taking of blood specimens, cannot cause an anticomplementary action.

**Overheating of the Entire Blood and of the Sera.** Heating of the blood or of the separate serum to a higher degree of temperature for a protracted period will, by coagulating action on the proteins of the serum, give rise to an anticomplementary action. However, even if heated to 60 degrees C. but for a short period sera or bloods will not give rise to anticomplementary action.

**Old Sera and Sera Infected with Bacteria.** If sera are kept sterile and in the ice-chest, they will keep for a long time. Negative sera will keep for a longer period than positive sera. At the same time, it is always a safe practice when using old sera to heat them again to 55 degrees

for 30 minutes before using. Infected sera, especially if old, are always strongly anticomplementary.

**Influence of Diarsenol.** Specimens of blood from 100 patients before and after injection of diarsenol were tested and only two cases were anticomplementary after the injection. The presence in the serum of fresh solution of diarsenol in a proportion of 0.025 per cent may give rise to anticomplementary action. However, if the blood is collected in the same apparatus the first small amount of blood should be discarded.

In spite of all attempts to substitute a more direct and less complicated procedure for the somewhat cumbersome Wassermann test, no reaction as yet proposed can compare in reliability with the full Wassermann test. It is unfortunate that the Wassermann is so surrounded with pitfalls, but, given a reasonable measure of care on the part of the pathologist, these can be surmounted in almost all cases. — M. E. W.

### **OBSTETRICS and PEDIATRICS**

Edited by Carrol M. Pounders, M. D.  
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**A TONIC INSUFFICIENCY OF THE STOMACH A CAUSE OF VOMITING AND A LACK OF APPETITE IN INFANTS.**—Gustav Linberg, Amer. *Journal of Diseases of Children*, March, 1924.

Congenital stenosis or atresia, or more commonly, pylorospasm or pyloric stenosis is responsible for a great many cases of persistent vomiting in the new born. But there is a type of vomiting that has been difficult to explain heretofore. It is usually called habitual vomiting. It has been difficult to control. In this type of cases there is usually no visible peristalsis or pyloric tumor. The vomiting is persistent, coming immediately after each nursing, or even some time afterwards. It may be quite voluminous but is usually not projectile. The vomitus may show a yellowish color from the presence of bile. The baby loses weight, becomes dehydrated and may have a sub-normal temperature. There is loss of appetite.

These cases have been studied under the fluoroscope with results that are interesting. While the child was in the horizontal position the stomach would fail to empty itself at all. The peristaltic waves were observed as in the normal. On placing the child in an almost erect position the food was seen to pass through the pylorus with no difficulty. In both positions tonic contractions of the stomach about its contents was not seen. On assuming the half-erect position the vomiting stopped and a steady normal gain was observed.

This can be explained by the function of the infants stomach as contrasted with that of the adult. In the adult there is a double function. First there is a tonic contraction. The walls of the stomach contract around its contents, giving the stomach a varying volume and shape, according to the degree of fullness. This has been called the peristaltic function. Then there are the peristaltic contractions, consisting of waves of contraction passing from the cardia to the pylorus. Emptying of the stomach is a result of the combination of the two. In the normal infant's stomach the peristaltic action is not developed. It does not contract down on its contents. The peristaltic action is developed and is usually sufficient to produce emptying. There being no tonic contrac-

tion the stomach remains completely distended, even when there is only a small content. This explains the difficulty of emptying in the horizontal position in certain cases. It also explains why this is accomplished when the baby is put in a half erect position. On assuming this position the symptoms—loss of appetite and vomiting—disappear at once. The peristaltic action is aroused by giving food of a more solid consistency—even in young infants.

#### EVERY DAY IS BABY DAY.—Health News and Views, Hygeia, May, 1924.

With the slogan, "Every Day Is Baby Day," the state of Indiana, through its division of infant and child hygiene of the state board of health, is attempting to secure for every Indiana baby the following:

1. Healthy parents.
2. Instruction and care of mother by physician.
3. Mother free from overwork or worry.
4. Mother's milk. Gradual weaning by the end of the first year.
5. Regular hours for meals, bath and sleep. Well balanced diet.
6. Water to drink between meals.
7. Sleep undisturbed in a dark room having a constant current of cool, fresh air.
8. Clothing that does not restrict.
9. Gentle play with quiet laughter.
10. A part of each fine day out of doors.
11. Daily exposure to sunlight, indoors or out. (Eyes protected.)
12. Comfort. Avoiding extremes of heat or cold.
13. A happy home.
14. Regular "checking up" by physician.
15. Protection: From kisses with germs, fingers poking for teeth, showing off, bouncing and high tossing, unsuitable food, too frequent feeding, pacifiers, dirt, discord, loud voices and nagging, movies and jazz.

#### MENINGEAL HEMORRHAGES IN THE NEW-BORN AND THEIR REMOTE CONSEQUENCES.—Alfred Gordon, Amer. Journal of Diseases of Children, April, 1924.

The cause of meningeal hemorrhage is, principally, the tearing of the membranes due to their stretching, leading to rupture of the blood vessels. The tearing is produced by the great cranial stress frequently resulting from protracted, difficult labor, with instrumental delivery—especially when the instruments are applied with excessive force or to the wrong diameter of the head.

As a preventive aspect must be considered all forces that are liable to lead to tearing of the meninges and blood vessels. These consist of wrong presentation and disposition of the fetus and other causes of difficult labor, such as prolapse of the cord, and the use of instruments or various manipulations in the delivery of the fetus.

Supratentorial and infratentorial hemorrhages, generally speaking, present somewhat different clinical pictures. In the former the blood spreads over the cerebral hemispheres and cannot go beyond the lower surface of the tentorium. This causes a bulging fontanel and brings on a group of nervous phenomena—such as sleeplessness, and great restlessness with convulsive seizures. Cyanosis is late in appearing and, when it does appear is not pronounced. Lumbar puncture does not avail much in this type of case, as the blood cannot reach the subarachnoid cavity easily.

Craniotomy in the first few days of life, before the clot has already produced damage to the cortical tissue, is the only procedure that produces favorable results.

In the infratentorial type the blood spreads over the hemispheres of the cerebellum and into the medulla. It reaches the subarachnoid space and may extend into the spinal cord. There is considerable depression, apathy, somnolence, early cyanosis vasomotor and respiratory manifestations with rigidity of the neck muscles. The anterior fontanel distends slowly. In this type of case lumbar puncture may be of considerable benefit. Frequent withdrawal of fluid is often necessary. Complete recovery has been reported in numbers of cases.

The more remote effects of the hemorrhage are seen in such conditions as Little's disease, hemiplegias, athetosis, athetoso-choreic conditions and idiocy.

#### THE NECESSITY OF BETTER DENTISTRY FOR CHILDREN.—Charles B. Bray, D.D.S., Archives of Pediatrics, Feb., 1924.

It is pointed out that dentistry for children has been the most neglected field of any of the branches of dental science. This condition of affairs is changing and preventive dentistry is coming into its own. It is now becoming recognized that if focal infection is to be eliminated from a dental standpoint, the work must be begun before it is established—in the early stages of childhood.

With the exception of accidents, 99 per cent of the bad or abscessed teeth in children are caused by neglect and carelessness. The writer believes that the three most prevalent causes for this condition are: (1) Lack of education of the laity in regard to the importance of mouth hygiene. (2) The difficulty of working on the teeth of children and the care and diplomacy necessary in handling them. (3) The haphazard way in which dentistry for children has been done in the past—often without charge. Usually the man who worked for the family worked for the children, and neglected a great many times to do the best thing for the child because of the time it required, knowing that he was not to receive any compensation for it.

Because the temporary teeth are in a constant state of disintegration they require more care than the permanent ones and will not stand as much neglect. The work of Rosenau, Hunter and Billings proves conclusively that the teeth can be important foci of infection for a great many serious conditions. The writer believes that if we eliminate diseased mouths and infected tonsils, we will lessen by 50 per cent the child's chances of having the contagious diseases of childhood, such as are contracted or carried in the mouth and nasal passages. And we would make a 75 per cent better student at school and a 100 per cent better child mentally and morally. Statistics prove that the child with infected teeth and tonsils is far below normal from an educational standpoint.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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**BRIDGING THE CHASM BETWEEN THE FUNDAMENTAL AND THE CLINICAL BRANCHES IN MEDICAL SCHOOLS.**—The Journal of the American Medical Association, August 18, 1923.

The author feels that the criticism of many teachers of clinical subjects in medical schools, that the fundamental subjects are not well taught, is unjustified. He considers them well taught as a rule but feels that too much time lapses and that there is too little connection made between them. He suggests that much time and energy could be saved by teaching the student the physical and x-ray findings of the living normal human body at the time or just after he has finished his work in the fundamental branches.

This has been done for some time at the University of Minnesota Medical School in connection with courses on the diagnosis and treatment of diseases of the lungs. It has been found that students who have taken the work on the normal chest are able to acquire as much clinical knowledge in a given time as those who have not had this preliminary course.

**STUDIES ON THE RESPIRATORY ORGANS IN HEALTH AND DISEASE.**—1. A Valuable Aid in the Diagnosis of Early Tuberculosis. J. A. Myers, Ph.D., M.D., Minnesota Medicine, August 1921.

About one-half cc. of the suspected material, sputum or other discharge, negative by usual laboratory tests, is injected subcutaneously into the inguinal region of a guinea pig. The inguinal lymph nodes on the site of the injection become enlarged and palpable in about ten to fourteen days in most positive cases. It is not necessary to section and study these nodes microscopically since so many have been studied this way and the findings were almost invariably those of a tuberculous lesion. In order to confirm the diagnosis, however, a test may be made with Kock's Old Tuberculin. If negative the animal should be kept under observation and the test repeated in a few days. If negative after two weeks it is safe to report a negative diagnosis.

This simple method, requiring neither a high degree of laboratory skill nor elaborate equipment, often enables the physician to make a diagnosis weeks before it could be made otherwise.

**GRADUATE INSTRUCTION IN TUBERCULOSIS.**—J. A. Myers, Ph.D., M.D. The Journal of the American Medical Association, February 3, 1924.

Statistics compiled by the Minnesota State Advisory Commission show that 82.7 per cent of the patients admitted to the state and county sanatoriums are moderately and far advanced and have therefore lost their best chances for recovery before admission. It is evident that something is wrong with the system of medical education when such a condition prevails.

Owing to the overcrowded curriculums in medical schools, students cannot become expert in any particular branch. Post-graduate work thus be-

comes a necessity for the training of specialists.

The University of Minnesota Graduate School of Medicine has access to about 1500 tuberculous adults and more than 500 children in sanatoriums and preventoriums. It offers special advantages for the study of all diseases of the lungs and allied subjects. The objects of the school are to offer special training in the diagnosis of early tuberculosis to general practitioners, to train laboratory and x-ray specialists, to train research workers and especially to train specialists with a working knowledge of tuberculosis as a whole.

**TUBERCULOSIS IN SCHOOL CHILDREN: ITS DIAGNOSIS, CLASSIFICATION AND TREATMENT.**—Minnesota Medicine, August, 1923. J. A. Myers, Ph.D., M.D.

While it is usually easy to detect tuberculous infection in children, it is extremely difficult to differentiate between clinical and non-clinical lesions.

In examining school children we find five main groups. (1) Children with no evidence of tuberculosis. (2) Children with tuberculous infection without tuberculous disease. (3) Cases of masked juvenile tuberculosis. (4) Children with definite tuberculosis of the lymph nodes, particularly the bronchial and cervical nodes. (5) Children with definite pulmonary tuberculosis.

A negative diagnosis may be made safely with children of the first group after they have been given a thoro examination.

Children of the second group have the same findings except that they show a positive reaction to tuberculin.

Children of the third group have in addition to a positive tuberculin reaction such symptoms as loss of weight, frequent colds, occasional fever, or cough which cannot be accounted for otherwise. It may be impossible to locate a tuberculous lesion but it is believed to exist some place in the child's body.

Children of the fourth group have demonstrable lesions of the bones or lymph glands. Tuberculosis of the bronchial nodes is particularly difficult of diagnosis. A history of exposure is important and a positive tuberculin test and demonstration of enlarged bronchial glands are essential for diagnosis. In order to make a diagnosis of tuberculous cervical glands there must be definite enlargement of these glands. Any gland enlarged over three months and not otherwise explained should be regarded as tuberculous. History of exposure is important but does not establish diagnosis. All other causes for enlargement of these glands such as Hodgkins disease, acute and chronic infected tonsils, carious teeth, pharyngitis, pediculosis, otitis media and syphilis should be carefully ruled out. A microscopic examination should be made on all specimens removed.

Children of the fifth group are for the most part above the age of ten or eleven years. However, pulmonary tuberculosis may exist at any age. Emphasis must be placed upon past history and present symptoms, such as prolonged exposure, idiopathic pleurisy with effusion, hemoptysis, persistent cough, expectoration, pain in chest, fever, rapid pulse, loss of weight and strength, dyspnea, night sweats and anorexia. The presence of any one of these should lead one to consider pulmonary tuberculosis.

Children falling into groups one and two may be returned to their regular schools with necessary provisions for further examinations and observation.

Those in group three should be placed in an observation ward where they may be carefully studied as long as necessary.

Those in group four should be sent to a special school for tuberculous children such as the Lyman-hurst School in Minneapolis. Those found to have clinically active disease should be placed in institutions where such conditions are given special attention. Later they may be transferred to the open-air school and when their condition warrants it, back to their regular schools.

The children in group five should be sent to the school for tuberculous children. If the lesions prove non-clinical they should be transferred to an open-air school under competent supervision. Those with any evidence of clinical activity should be sent to a children's ward in a hospital or sanatorium where they should remain until the disease is apparently arrested. They may then be re-admitted to the school for tuberculous children. The children with inactive clinical tuberculosis may remain at their school work under very strict supervision.

In dealing with tuberculous children the welfare of the community as well as that of the individual must be kept constantly in mind. Many cases not clinically active are capable of discharging bacilli and thus infecting others. In special schools the children are taught not only how to protect others but how to lead happy, useful lives at the same time.

### *EYE, EAR, NOSE and THROAT*

Edited by Jas. C. Braswell, M. D.

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#### **LOCALIZATION OF FOREIGN BODIES IN THE EYE.**—Hubeny, M. J.: *Radiology*, 1924, ii, 33.

No examination for the possible presence of a foreign body in the eyeball should be considered complete without the use of the X-ray. If a foreign body is demonstrated it should be localized by means of a localization apparatus and not just by anteroposterior and lateral views.

From a legal standpoint a negative report should always read: "The eye appears negative for foreign body opaque to the X-ray."

Hubeny establishes the presence of an opaque foreign body by using two films exposed simultaneously. On one he takes a postero-anterior projection and on the other a lateral projection. Intensifying screens should not be employed. Dependence cannot be placed on movement of a foreign body to demonstrate its presence in the eye as foreign bodies embedded in the sclera or eye muscles produce the same effect and movement has less diagnostic value the nearer a foreign body lies to the pole. When an instrument such as Sweets is used the head should be adjusted before each exposure. When the foreign body is a splinter of glass, a roentgen ray examination should be made.

#### **THE SURGICAL TREATMENT OF CONCOMITANT SQUINT.**—Peter, L. C.: *Atlantic M. J.*, xxvii, 266.

The eyes may be straightened by tenotomy, by tendon tucking and by resection with or without advancement. The treatment depends upon the type of squint and whether or not the deviating eye is amblyopic. If the eye is hopelessly amblyopic only a cosmetic operation is indicated and

the surgery is confined to one eye. In such cases the author does a resection with advancement, depending upon the angle of squint. If this is not sufficient a tenotomy of the opposing muscle in the same eye is warranted.

If vision is equally good in both eyes and fusion is fair or good, the same amount of surgery should be done on both eyes and the operation should consist in resection with or without advancement, never tenotomy. The same treatment is indicated in alternating convergent squint.

#### **ABSCESSSES OF THE NASAL SEPTUM.**—Carter, W. W.: *Med. J. & Rec.*, 1924, cxix, Supp, xi.

Carter is of the opinion that practically all abscesses of the nasal septum are the result of trauma. In the treatment an L-shaped incision is made on the left side, the long arm of the L corresponding to the anterior border of the septum and the short arm extending backward along the floor of the nose. The incision is made freely into the abscess cavity. The pus is then washed out with warm sterilized salt solution, the cavity is cleaned out with sterile absorbent cotton until practically dry, then with carbolic acid and last with 95 per cent grain alcohol and then gold wire splints are introduced into each nasal fossa.

For the correction of saddle-back deformity due to abscess the author transplants autogenous bone and cartilage grafts. A strip of conjoined bone and cartilage from a rib is introduced through a slit in the roof of the left nasal cavity in such a manner as to build up and support the nasal bridge. The upper end of the graft, which is placed in contact with the frontal bone just above the nasal spine, establishes bony union in about two months. The lower end of the graft which is composed of cartilage extends into the tip. The transplantation is done as soon as the abscess has healed.

#### **THE TREATMENT OF PARANASAL SINUS DISEASE IN INFANTS AND YOUNG CHILDREN.**

Dean, L. W.: *Laryngoscope*, 1924, xxxiv, 30.

Dean thinks that a suitable climate is one of the most important factors in the prognosis of chronic paranasal sinus disease in children and infants. The next most important factor is diet and the author emphasizes the importance of the fat vitamin. Other important factors such as proper hygienic conditions, dress, living and sleeping rooms are discussed.

Diseased tonsils and adenoids should be removed in every case of chronic paranasal sinus disease as the author has found that cures have been affected in eighty per cent of the cases by such procedures.

In children a recurrence of the trouble following a thorough operation on the sinus is unusual. A sinus should not be operated upon until non-surgical treatment has been tried for several months and has failed to bring about a cure. Radical operations should be done only when the condition can be relieved only by eradication of the sinus trouble.

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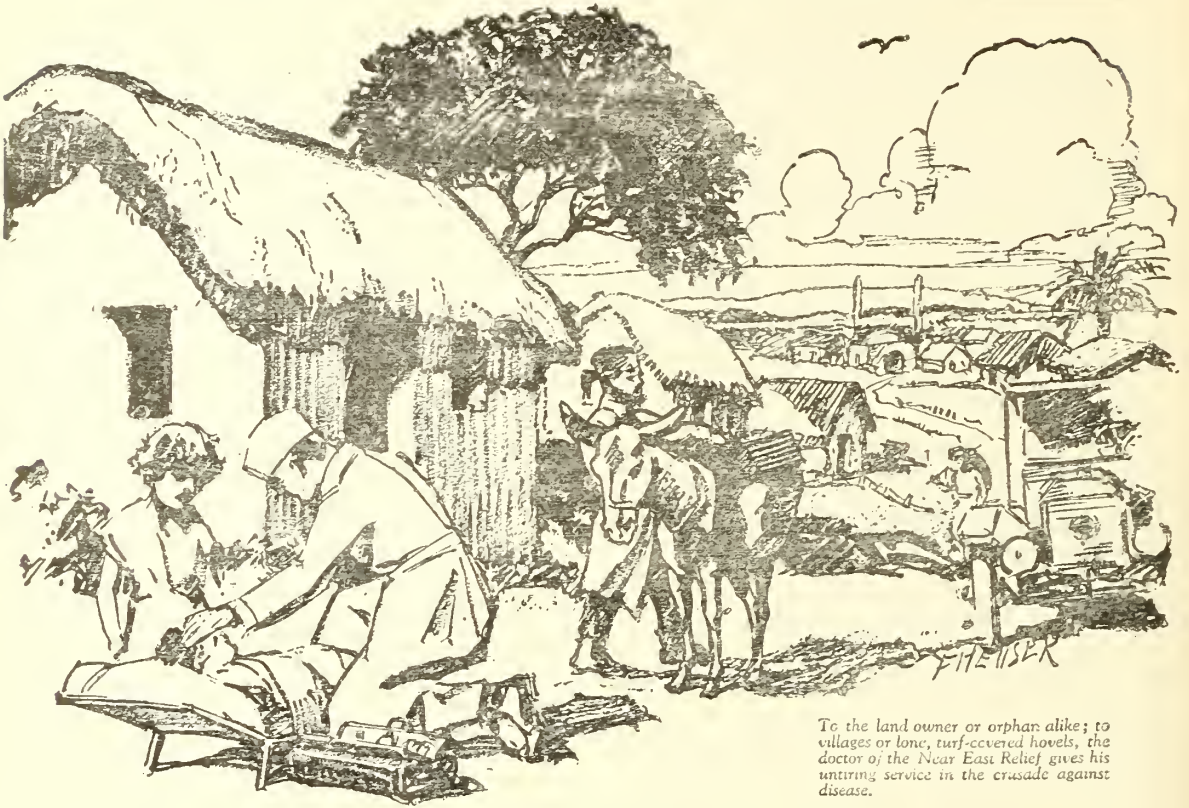
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### CAUSES OF TUMORS\*

L. A. TURLEY, M.A., PH.D.  
OKLAHOMA CITY

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A catalogue of the causes of tumors will include every pathogenic factor that is known or has been brought forward as a cause for an abnormal condition, and so much has been said about this subject that many pathologists have come to the conclusion expressed by McCallum in his text-book of Pathology to the effect that we know nothing about the cause of tumors and that time spent in a discussion of this subject is largely time wasted. But no scientific or other problem was ever solved in this manner. It is to be hoped that by increased rather than diminished discussion, we may, by following a hint given here or there arrive at something definite, and in the meantime bring out points which will enable us to combat this, one of the greatest scourges of the human race. I have neither the time nor the inclination to discuss at length all the theories of tumor formation, but there are a few which are being constantly reiterated or re-discovered which it may be worth while to discuss.

One of these is Cohnheim's misplaced cell theory. This theory is based on the assumption that in the development of the body, cells are partitioned off or separated from the group to which they belong and are included in masses of cells which develop into different tissues or organs, or the persistence of embryological structures which should have involuted and disappeared; that later some stimulus excites these isolated cells to development, and, being freed from conditions which surrounded them at the time they should have developed, they grow wild from lack of control. While it is undoubtedly true that such instances occur, there is no evidence to warrant the fact that they occur as often as tumors do, and furthermore, in lo-

calities where tumors most often occur, the possibility of such accidents is least, whereas places where opportunities for such accidents are greatest tumors are less frequent. It often also happens that tumors are diagnosed as being of a certain class which would have indicated such an origin when a closer, more careful study shows that the difficulty has been with the diagnostician. A good example of this is the hyper-nephroma of the kidney. That such a tumor should be primary is extremely unlikely and a more careful study of these tumors has led most pathologists to question whether such tumors are every primary in the kidney. Furthermore a careful study of various pathological processes reveals the fact that tumors arise from normal cells that not only belong where they are found, but also have previously been functioning normally, so that this theory cannot be accepted as a general explanation of tumor formation.

Another theory which has held a long time and has recently been revived is the infection theory. There is no question but that infections play a part in tumor formation. It is also true that tumors arise without infection in sites where infection is highly improbable or where no evidence of any infection can be found; and further, while it is true that infections and even parasites have been found in tumors it is also true that there are tumors of the same type arising from the same tissues in which no infection or any evidence of any infection of any type can be found.

Another theory which has been somewhat timidly expressed, but which is gaining strength is that tumors arise in response to chemical stimuli or the lack of certain chemical substances in the environment of the cells. Again it is undoubtedly true that chemical irritation plays a part in tumor formation, but just how much weight must be given to this theory depends largely on what is included in the terms, chemical irritation, or deficiency.

Similarly, the traumatic theory has its evidence and its exceptions, and while it is true that no student of the subject will deny that trauma plays a part in tumor formation, it is

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also true that tumors form where traumatic irritation is next to impossible, for example, in the brain, or where it is highly improbable, as tumor of the pancreas or other internal organs. It is the opinion of the author that we will come much nearer solving this problem if we cease to consider tumors as an extraneous something, or make a priori deductions and conclusions, but turn our attention to a closer study of the tumors themselves, and of the cells which compose the body, and of general biological laws, for the reason that the tissue cells are biological creatures.

A careful study of tumors reveals many similarities between them and normal tissues. They always arise from normal tissues. There is no case in which a tumor is composed of cells which are essentially different from those comprising normal structures, so that a tumor can in no sense be considered a parasite from the standpoint of being an organism independent of its host. The tumor cells resemble the normal cells near enough that in most cases it is possible to tell from what tissues the tumors arose, so that it is possible to classify tumors on the basis of the histological origin or resemblance to normal tissues. They may depart widely from the adult tissue from which they arose, so that they at first sight appear to be different tissues, but they never depart so widely that they do not resemble either the adult tissue or its ontogenetic predecessors. The tumor cells tend to arrange themselves in a manner similar to the normal tissues; a fact which is indicated by the names given to tumors. The cells multiply and the tumors increase in bulk by the same processes which are observed in normal tissues. These processes may be more or less atypical in detail, but we do not find tumor cells reproducing by asexual methods or by simple division, but always by mitosis. They tend to develop in such a way as to carry on the functions similar to the normal cells from which they spring. We never find tumor cells so far departing from the normal as to become cells of a different type of tissue than those from which they arose. Thus we never find tumors of epithelial origin changing to tumors of connective tissue or vice versa. We may find, however, that tumors of connective tissue may become or have within their mass bony or cartilaginous elements. But this is explained by the simple fact that the predecessors of bone and cartilage are modified connective tissue cells. We also find tumor connective tissue producing mucous; but this is again not unheard of, for we have a very common example of Whorton's jelly.

On the other hand we find that cells com-

posing tumors always depart more or less from the normal or from the tissues from which they arose in the general arrangement and from the fact that tumor cells nearly always tend to revert to a more embryonic type, although this reversion may be slight. But this is a phenomenon which occurs in all normal cells at the time of regeneration and at a time of multiplication in the process of repairing injury. The tumor cells are always devoid of useful function although in the great majority of cases they attempt to perform similar functions to those of the adult cell, so that in summing up these facts we must come to the conclusion that tumors are atypical new growths arising from pre-existing tissues. This must lead us to the conclusion that the cause of tumors must be some factor working on the cells of the body bringing about an intensification of the property of all cells to reproduce their kind, but at the same time acting in such a way that there is a profound disturbance of the processes of that phenomenon. In other words the potentiality to tumor formation is contained in every living cell of the human body, and the possibility of tumor formation is an intrinsic property of all living cells. The probability of such a phenomenon taking place depends on whether or not the cell is subjected to this baneful influence. So that the problem of solving the cause of tumors resolves itself into finding out those conditions of the environment and stimuli within the environment which lead to active multiplication of the cells, and here again we must study the tissues under the conditions of normal or ordinary life, and try to seek out the various factors which induce cell multiplication.

One of the most fundamental stimuli to cell division is a disturbance of the equilibrium between the size of the mass of cytoplasm to nuclear surface, so that well nourished cells have a greater tendency to multiply than those less well nourished. It is stated by some authorities that tumors are frequent in individuals who are apparently over-nourished or over well fed. Another fundamental law of cell division or multiplication is that when any organism approaches a death due to slow acting deleterious factors in the environment there is an extra effort made at reproduction, a phenomenon which is often seen exemplified in trees and flowers blooming when the plant itself is dying. We see among lower organisms sometimes specialized forms of reproduction at times when the equilibrium of vital conditions is disturbed or when the conditions of environment are inimicable to the physiological health of the individual, an example of which is the sporula-

tion of certain bacteria, the formation of the encysted forms of amœbas, or the gemules of fresh water sponges. In case of human or animal tissues we find tumor formation especially of epithelial cells most frequent among older people of the so-called cancer age. This superstition is based on the fact that carcinomas are progressively more frequent when the individual gets to the point when as a result of age, involution processes are more extensive. It has also been stated that certain types of carcinoma are more frequent among those poorly nourished. Also recent studies have demonstrated the fact that by far the greater number of tumors arising from stratified squamous epithelium arise from the middle layer, a layer, which as you know is progressing from well nourished to poorly nourished or actually starved cells.

It has also been found that cell multiplication is induced by the presence or sometimes by the lack of presence of certain chemicals in the environment of the cells. It has long been known that the unfertilized ova of certain lower forms of animal life can be stimulated into parthogenic development by merely placing these unfertilized ova in solutions of certain chemicals. Reinke produced atypical epithelial growth by injecting four per cent ether into the eye of a salamander, and found that the atypical growth would continue to grow when transplanted into the peritoneum of other salamanders. B. Fischer found that the introduction of Sharlach R in olive oil underneath the skin produced carcinoma-like proliferation of the epithelium in rabbits' ears. Similar results were secured by Lameson and Haga by the use of Sudan III. Haga also produced an adenomatous growth in the rabbit's stomach by feeding lanolin. The occurrence of malignant tumors in paraffin workers is apparently due to some such chemical irritation and there is little doubt that the proliferation seen in the neighborhood of certain parasites such as the adenomatous dilatation of the bile ducts in infections of eimeria or the carcinoma which has been produced by Febiger by the introduction of *spiroptera neoplastica* and other parasites are due to the chemical irritation of the by-products of these parasites.

It is a well known fact that the development of certain tissues and organs in the body is dependent on the action of other organs and tissues such as the development of the placenta being dependent on the activity of the corpora lutea, or the development of the secondary sex characteristics being dependent on the activity of the gonads, and it may very well be possible that the development of tumors is more or less dependent on

excesses or deficiencies in the synthetic products of cells either within the same tissues or other tissues, in fact it has been stated that the growth of chorion epithelioma is dependent upon persistent or atypical luteal functions.

Various investigators have noticed changes in the chemistry and chemical reactions of the blood and other tissues in cases of tumors. Beebe and Clowes have demonstrated an excess of potassium and deficiency of calcium in rapidly growing tumors free from necrosis. The percentage of pentose is quite different in malignant tumors and normal tissues. The relative proportions of fat and lecithin is different in rapidly growing and degenerating tumors. The extracts of tumor tissue and normal tissue split polypeptids in different manner. It has been found by Brieger and Trebing that the antitryptic power of the blood was altered in cases of malignant tumors. It has also been found that the surface tension of the blood is altered by the presence of malignant tumors. The sugar tolerance of the system is quite changed in malignant disease, so much so that this test is almost diagnostic. Many other instances of similarly changed reactions might be given, but the important point in all these abnormalities is, do these alterations and changed reactions precede or follow the development of malignant diseases?

It is a well known fact that any injury to any cell, regardless of the nature of the injury, so long as it does not change the cell in such a way as to prevent its performing its vital functions, will stimulate reparative and reproductive processes. These processes are essentially no different from those displayed in tumor growth except that in one case they proceed in typical fashion and orderly manner and that the process ceases when the injury is repaired, whereas in tumor growth the processes are atypical and disorderly, and there is apparently no limit to their extent.

From the foregoing it is apparent that tumors are merely cell reproductions under such abnormal conditions or aroused by such abnormal stimuli that the process proceeds in an atypical and unrestrained manner. We have also seen that the power to multiply is inherent in every living cell, and that such multiplication is a very normal function and one that is manifested in the ordinary life of a great many, if not most cells under circumstances such as regeneration or convalescence after mild injury or the actual replacing of tissues lost through injury, and that such reproduction is normally under the control, first, of the inherent properties of the cell itself, and second, the influence of the secre-

tions of the other cells. The problem for us then becomes under what abnormal conditions, or might better say, unusual conditions this process may be provoked and how may there be brought about disturbance of normal control?

Among the forces thus operating, perhaps one of the commonest is a long continued demand for the exercise of these regenerative and reproductive functions on the part of relatively few cells. Such demand arises under conditions of long continued mild trauma, such as the irritation from a carious tooth, or the classical example of the clay pipe stem. Another condition giving rise to such demand is long continued mild inflammatory process such as we see for example in endocervicitis. Some authors claim that carcinoma of the uterus is preceded in 90 per cent of the cases by this mild inflammatory condition. Involution processes such as those occurring in advanced life or the advanced life of individual organs under which conditions there is evidently a lessening of the powers of control of tissue activity coupled with the phenomenon mentioned above of the extra effort of reproduction under such circumstances. In my own experience I have never seen a tumor of the breast in which there was not evidence of a previous mastitis accompanied by retrogressive processes. Chemical irritation such as the action of cigarette smoke on one spot on the tongue, the chemicals to which the parts of the body are exposed in certain manufacturing processes, the irritating action of certain chemicals in the environment such as the by-products of parasites or lipid solvents; all of these factors acting singly or in combination on the one hand provoke cell proliferation, and on the other hand interfere with the normal control to such proliferation. Still more subtle and less well understood are the changes in the chemical composition of the blood whereby certain mineral salts are in excess or deficiency, or as has been suggested above, probable other changes which may include the lack of certain anti-bodies; all seem to play a part in this wild growth of new tissues, so that our problem of determining the cause of tumor growth in a particular case becomes a very complex one, and the avoidance of the inception or the check of such growth becomes one of the most complex of all problems to be solved in the continuance of health and well being. But any practitioner can do a great deal in cutting down the mortality from tumors, if by advice and practice he, on the one hand educates his patients to the prompt attention to chronic inflammations and traumas and, on

the other hand promptly and effectively treat any such lesions that are brought to his notice. So far as we know now this is our only means of checking this growing scourge of the human race.

*Discussion:* RALPH E. MYERS, M.A., M.D., OKLAHOMA CITY.

Unfortunately Dr. Turley has worked out his subject so carefully that he has left little, if any, room for argument. Accordingly, I shall endeavor to enlarge on certain points which he has brought out and to consider briefly some questions which he didn't have time to take up.

In the first place I think it would be profitable to look into the question of heredity. Everyone who deals much with cancer becomes aware that histories of cancer patients pointing to hereditary causes are the exception rather than the rule. Perhaps this is due to the fact that any history dealing with this question of heredity must necessarily be very incomplete. At any rate Dr. Slye in an extensive series of experiments on mice has seemed to prove that for mice, at least, spontaneous cancer is inheritable. In a series of experiments extending over several years she has found that she can segregate mice with cancer and non-cancer tendencies—the non-cancer tendency being dominant. By selective breeding cancer could be either implanted or eliminated. While these experiments seem to be quite conclusive, I think some recent work on rat liver-cyst sarcoma by Bullock and Curtis at the Crocker Institute gives us the proper angle from which to view this question. By feeding rats the eggs of *Taenia Crassicolis*, the cat tapeworm, the livers of these rats become infected with the larva form, *Cysticercus fasciolaris*. In some of these rats malignant sarcomas develop in the cyst wall. By inter-breeding those rats susceptible to sarcoma, they have been able to produce strains 100 per cent of which become sarcomatous, if, and only if, this tapeworm irritant is present. If the cysts are not present, the susceptibility to sarcoma remains latent. The obvious conclusion to be drawn from this experiment is that heredity is not the cause of cancer. Doubtless animals, including man, do inherit varying resistances against cancer. The same irritations which would cause cancer in one does not cause cancer in the other because of less susceptibility to the cancer process. To me this seems the sane view of the question of heredity.

Dr. Turley has suggested that cancer may to a certain extent be dependent upon some aberrations in the internal secretions. There are no doubt certain facts which point in

favor of this idea, but one should wander into the nebulous realm of endocrinology with the greatest caution. Far be it from me to suggest the possibility of any addition to the extended list of human ailments supposed to be amenable to pluriglandular therapy.

The idea of a bacterial cause of cancer as evolved by Dr. Smith from his plant cancers caused by *Bacterium tumefaciens* is a rather fascinating one. However, the only animal experiments to support this hypothesis are Rous's chicken sarcomas produced by a filterable virus. Experimental cancers caused by worms, by application of tar, of Sudan III, etc., must necessarily point very strongly against this idea. But they all do have something in common which we can cover by the term irritation as used in its broadest sense. I quite agree with Dr. Turley's general conclusions.

Likewise I am entirely in accord with the ideas he expresses as to the means of checking this scourge. While one should endeavor to cut down useless surgery to the minimum, it is far better to eradicate now and then some non-cancerous lesions than to always wait until we are dealing with cancer beyond peradventure of a doubt.

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C. J. FISHMAN, M.D.

It seems to be generally accepted that whether benign or malignant tumors are considered, there must be something about the inherent nature of the cells of the organism which, under proper conditions, tend to grow and generate the type of tissue which is inherent in that particular cell. We may speak of an "Anlage" which may produce, sometime in the future, under proper conditions, tumor tissue. What these factors, beside the inherent nature of the cells are, we do not definitely know. There may be something in our modern way of life, provided we prove definitely that tumor formation is more common today than it has been in the past, which should explain the greater frequency of tumor, of either benign or malignant type.

However, one must consider that the general mortality has been so much reduced in the preventable diseases, that tumor growth and prevalence is perhaps relatively more common than actually existing as compared with a generation or so before. Certainly, the age of the expectancy of life has been increased remarkably, and that must be taken into consideration always, when speaking of disease in older individuals.

Buckley, of New York, suggested at one time that malignancy was more common in meat-eating people, and of course it is quite possible that this is true, because the nitro-

gen products of metabolism may be one of the irritating factors in these cases, which will allow the primary tumor Anlage to develop by the irritation from these products.

All experiments seem to prove two essential points in regard to the development of tumors; first, that there is an inherent tendency of certain cells to grow and to develop and second, there are certain conditions of irritation in individual cases which cause these cells to reproduce and develop a tumor formation.

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*Closing Summary*—L. A. TURLEY, M.D.

As to the role of infections and the information which may be gotten from plant tumors I wish to say that my first study of tumors began about twenty-five years ago when I was connected with the Entomological Department of the U. S. Bureau of Agriculture, and I am free to say that I think that our knowledge of the cause of tumors has been more beclouded than clarified by the facts of plant tumors, and furthermore, this phenomenon as observed in the plant world has its exact parallel in the animal world in the action of bacillus tuberculosis causing tubercles treponema pallida causing gummas, and others which might be mentioned. These are all kinds of multiplication of tissues excited by the products of infections, but there is one characteristic difference between these lesions and true tumors, which is, that as soon as the infection is killed or removed the tissue proliferation ceases, whereas in true tumors there is no limit to the proliferation of the cells.

So far as heredity is concerned we are too apt to think of heredity in the terms of six fingers and harelip. As a matter of fact, malformations in the chemical composition of the cytoplasm of the cells are more common and more far reaching in their effects than these gross anatomical abnormalities. There are in medical literature histories of families in whom the individuals were subject to softening of the brain at about a certain age. This is evidently a case of heredity of the nature of which I speak. It is due to the abnormalities in the structure of the nerve tissues of these individuals. So far as the cells are concerned their abnormal structure and consequent abnormal function no doubt has a profound effect on what happens to the other cells in perhaps other parts of the body. In this way there is no question but that heredity plays a part in the susceptibility of or probability of tumor formation, provided appropriate stimuli are received later.

One of the men in discussing this paper stated that no new facts have been added to

our knowledge of tumor formation, and also spoke of the probability of finding one cause of tumor formation. In my opinion one of the most beclouding factors in our whole study of tumor formation is the search for one cause of all tumor formation or of all tumors of the same kind. We know that a great variety of factors in the environment, and different classes of stimuli will result in similar physiological activity, and also in the inciting of pathological processes, as for instance, necrosis, or as has just been emphasized, tissue proliferation. Since this is true of all other pathological processes, why should we still be seeking for one cause of tumors. If we get away from this one cause idea we will be relieved of a mill stone about the neck of progress in solving this question. I do not quite understand what the Doctor meant by no new facts. Many new facts have been discovered with regard to tumors. No outstanding, revolutionary, flamboyant facts, but bits of evidence here and there which have in the past modified and are daily modifying our opinions and ideas on the subject of the cause of tumors. It is easy to understand why there are more carcinomas than muscle or bone tumors, and we can a priori predict where tumors will be most frequent and tell why, and why it is that of the seven types of carcinoma derived from stratified squamous epithelium, five of them should come from the middle layer.

The question of the effect of meat eating has been brought up. Let me comfort those who still enjoy their roasts and steaks by saying that contrary to the statement made, tumors are not more common in individuals who are meat eaters than in vegetarians, if as much so. They are not so common in meat eating races as vegetarian races and among lower animals the incidence of cancers in vegetarian animals far exceeds the frequency of such lesions in carnivorous animals.

I heard a statement made in the discussion of a paper in another section that habits, dietary and other habits, had more effect on the incidence and increase of tumors than perhaps any other one factor, and I do not doubt that properly interpreted this statement is true.

I wish to thank Dr. Myers for bringing out additional facts that I could not take up for lack of time. These facts have an important bearing on the question. At least they are facts that must be settled.

I also thank the other doctors for their free discussion. I am sorry that we do not have the remainder of the afternoon to devote to this subject. Its importance demands even more time.

## TREATMENT OF AURICULAR FIBRILLATION\*

W. J. BRYAN, JR., M.D.

TULSA

Before entering into the treatment of the most common cardiac condition let us first consider the mechanics of decompensation. The characteristics of heart muscle are familiar to every one, but few consider the two main forces concerned in decompensation. By these we mean the "rest force" and the "reserve force." The rest force is that force required to carry on an efficient circulation when the body is at absolute rest. The reserve force is that force which is called into action when some added exertion is entered into and speeds up the circulation to meet bodily requirements. Now when we see a heart that is decompensating it means that the reserve force has been entirely destroyed and that the rest force is not sufficient to carry on an efficient circulation. This holds true to every decompensated heart independent of the etiology. Our object then in treatment is to assist by medical means and by adjustment of the patients habits, the reestablishment of the reserve force. How are we to do this?

First, let us consider the general principles that apply to every cardiac condition. The most important of these is rest. By rest, I mean absolute rest both mental and physical. To obtain mental rest, we must remove all business troubles—must see that the patient does not have any one connected with him in a business way as a visitor. This keeps down the desire for inquiries into said affairs. He must be denied all visitors—why? Visitors always carry on too lengthy a conversation; ask too many leading questions, and many have the habit of entering into lengthy narrations about friends or relatives that have suffered from the same troubles, invariably talking about the cases that ended fatally.

What is the effect on the patient?

First, carrying on a conversation increases his exertions and destroys all the benefits he has gained. Many times the results of several days' rest have been destroyed by some talkative well-meaning friend. Next, it decreases the hope of permanent recovery and increases his mental anguish; because the laity as well as a great many physicians consider heart disease as a hopeless proposition. Next, we must obtain physical rest. To accomplish this a pleasant, well ventilated room must be selected, one that is easily isolated

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1921.

and having a comfortable bed. A Gatche bed is the most satisfactory for with this type of bed the head can be elevated to the required height without any physical effort on the part of the patient. The bed pan and urinal must be used. Often we see patient on good treatment not getting results because they are allowed to go to the bath room or to use a commode at the side of the bed.

Then sleep must be obtained. Every effort must be made to get sleep for these patients. To obtain this, we have never found a substitute for morphia. Give the patient enough for the first three or four nights to insure good sleep. McKinzie often carries his patients for the first few days on rest and morphia. It is remarkable the improvement that results from just the above. Morphia should be withheld if possible during the day for it is the wakeful night hours that cause much fretting and restlessness, and this destroys results.

Diet is next in importance. Bland, easily assimilated, yet nourishing foods should be given with frequent small feedings. Never give any articles of food that require prolonged mastication. This causes too much exertion. Make the feedings small and frequent, the stomach should never be loaded with a heavy meal. If there is general edema the Karell diet should be given. This consists of 200 cc. of milk at 8-12-4-6. Cracked ice or water 200 cc. is allowed for thirst. This diet with saline catharsis is maintained until edema begins to subside. It can then be increased, bringing in, toast, Zwieback, ice cream and very soft foods. Later, soft boiled eggs may be added. The patient's condition and the decrease in edema is the index for increasing the diet. A careful check on fluid intake and urine output must be kept at all times. When some diuretic is indicated, good results have been obtained from "Diuretin" or "Theobromine Sod. Salicylate" in ten grain doses, three times a day. This applies to the chronic nephropathies only, for any acute renal condition should never be stimulated. To hasten the excretion of tissue fluids, catharsis should be carried out. The salines give the best results. Excellent results may be had with magnesium sulphate, beginning with dram—one dose—and increasing the dose until two or three good liquid stools are obtained each day. After edema has subsided, catharsis should be stopped. Purging in this way will not produce marked exhaustion and will relieve the renal tissue of some of its burdens.

After outlining the above, we must next consider the use of drugs. By reporting some two cases briefly this phase can be more

clearly brought out.

A. 1—Auricular Fibrillation (acute) with Mitral Regurgitation. Mr. B., age 38, contractor.

HISTORY: Three weeks ago, he noticed after some added exertion, as climbing stairs or running for a street car, that his heart beat very fast and irregular. He was conscious of suffocation and hurried breathing. He would stop and rest for a time and this would subside. About one week ago, noticed some soreness in right upper abdomen; also ankles were swollen at night. There was some increased frequency in voiding through the day, and would have to get up once every night. Lately he has been having numerous attacks of indigestion.

In past patient had measles, much tonsillitis, influenza and pneumonia. Tonsils removed after he had been having some soreness and aching in legs and joints.

EXAMINATION: Male, well nourished, weight 155 pounds. Dyspnoeic—no acites; edema of ankles—slight soreness of right upper abdomen. Heart: Apex 5th interspace, 11 cm. from mid-sternal line. Right cardiac border, 4th interspace 4.5 cm. from mid-sternal line. Rate 140 per minute. Pulse 130; pulse deficit 10. There was marked arrhythmia, consisting of periods of regular beats, then coupled beats; dropped beats; and extra systoles. Blood pressure, 125-70. Over mitral area blowing systolic murmur elicited. Pulmonic sound doubled. Aortic sound muffled.

This patient was put on absolute rest—Morphia, grains a quarter (1-4) given first night and an excellent night's rest was obtained. The following morning, Tr. digitalis minims thirty (M 30) three times a day, was ordered. This was continued for three days. At that time the patient had received four and a half drams (zlvss.) or eighteen (18) cc. of tr. The heart rate had decreased to seventy-six to the minute. Dyspnoea palpitation and sense of suffocation had subsided. The drug was discontinued because of toxic signs developing, such as nausea, coupled beats and emesis one time. The renal output after the first day increased markedly, and edema rapidly subsided. The patient was then given three days' rest with no medication at all. The heart rate varied from seventy-six to eighty but arrhythmia persisted. As the patient was perfectly comfortable we carried him one week with no medication.

Quinidine was then brought into use. Quinidine is one of the four alkaloids of cinchona bark and it has been used for a long time in heart conditions. Oppolzer in his lectures on treatment of internal diseases 1872 begins the chapter on treatment of heart disease with,

"The best and most powerful factors in dealing with heart patients are three: Rest, Digitalis and Quinine." It remains for Frey—1918—to revive the use of quinidine sulphate on the heart to restore normal rhythm. This drug should be used with caution for when given to patients not under close observation, toxic symptoms, and even death has resulted.

What are the indications for Quinidine? They are:

1. Heart that is not markedly enlarged.
2. Acute cardiac disturbance of short duration.
3. Auricular fibrillation of short duration.
4. Heart minus, serious valvular damage.

This patient was given three grains the first day to determine any susceptibility to the drug. The following day six grains three times a day was given. After some four such doses the heart became regular. Rate seventy-six per minute and patient stated that he never felt better. Medication was discontinued. Some weeks later the irregularity returned. Three doses of six grains each was given with return of normal rhythm. Patient was then given twelve grains every third day. The pulse remained regular during hospital stay, of one month. This patient later reported that he feels fine. At times he notices an irregularity but three or four capsules restore normal rhythm, and he carries out his normal duties with no embarrassment.

B. 2—Chronic Auricular Fibrillation. Mitral Stenosis and Regurgitation. Mrs. P, age 48. Present trouble began some three years ago, with dyspnoea on exertion; palpitation, and edema of the ankles. On exertion, as climbing stairs, she would be conscious of heart beating very fast and irregular. Also a sense of marked weakness. For the past one and one-half years has been disturbed at nights, out of a sound sleep, with a sense of suffocation. Some six months before present illness this patient was confined to her bed for one month. This attack was brought on by a series of social activities. The present illness began three weeks ago, with increase in the above symptoms—plus cough—brownish frothy sputum being raised at times.

The past history is negative, except for usual childhood diseases; much tonsilitis and pneumonia, some fifteen years ago, there has been some indigestion and gastric disturbances—and nocturia one to two times every night for the past two years.

EXAMINATION: Large, well developed patient; weight 170 pounds. Uncomfortable, due to dyspnoea—pulmonary congestion—ascites—enlarged, tender liver. Edema of legs and ankles.

Heart: Apex in 6th, intercostal space, 14 cm. from mid-sternal line. Right cardiac border, four interspace five cm., from mid-sternal line. Apical impulse diffuse. No thrills elicited. Rate at apex 180 plus to minute. At radial 150. Pulse deficit 30—blood pressure: Systolic 140, Diastolic 70. Over the mitral area and transmitted to the axilla, a blowing systolic murmur was elicited. Along the left border of sternum a roughened pre-systolic murmur, aortic sound muffled. Pulmonic sound doubled.

In urgent cases digitalis should be given in quantities, so that the system is saturated within (48) forty-eight hours. Eggleston advises the administration of the physiologic dose. According to this method 1 cc. of the tincture of digitalis to every ten pounds of body weight or 1 gm. of the digitalis leaf per ten pounds of body weight. The weight of this patient was 170 pounds; allowing ten lbs. for the edema. At this weight a dose of 16 cc. of the tincture should produce the desired digitalis effects. This patient was given four (4) cc. of tincture at 8 A. M., 12 m. and 6 P. M., the first day. That night the urine output was increased markedly—Morphia gr., 1-4, produced a restful night. The following day (2) two cc. of the tincture was given at 8 A. M., and 4 P. M. Good catharsis was produced by salines and the fluid intake was limited to 1000 cc., 800 cc. being milk. The patient at the end of the second day was considerably improved. Cardiac rate at apex 120 at radial 115. Dyspnoea was not so marked.

Pardee has shown that the body disposes daily on an average of 22 minims of tincture of digitalis of standard potency. To maintain full digitalis effect 66 minims of the tincture were given on the third day for the amount excreted on first, second and third days. Thereafter twenty-two (22) minims was given each day for ten days. At the end of this time the edema had subsided and pulse rate was 82 to the minute; but markedly irregular. A rest of two days was given before using quinidine. This was administered as in the previous case. After some 24 grains had been given the pulse became regular, but accompanied by dizziness. Sense of suffocation, small, soft pulse 100 to the minute, and nausea. Quinidine was immediately discontinued. The following day the above symptoms had subsided, but rate remained at ninety to minute. The third day, after quinidine was discontinued, the pulse became irregular and patient stated she felt much better. After some three days quinidine was again given in four grain doses, which resulted in sinus

rhythm, and the reappearance of the above toxic symptoms. Quinidine, therefore, was abandoned.

White is of the opinion that any chronic fibrillation of 1 (one) year or more standing is a contra-indication to the use of quinidine, because:

First: Any return to normal rhythm is of short duration.

Second: Danger of embolism arising from a clot formed in the auricle during fibrillation.

Third: Respiratory paralysis. A case of which has been reported by Frey.

Fourth: Sudden death has resulted.—The cause unknown, but possibly ventricular fibrillation.

This patient was again put on digitalis and it was forced until full effects were obtained. The pulse remaining from 75 to 80 to the minute; but very irregular. At periods she was allowed to come out from digitalis. After some three months, the patient was allowed out of bed and gradually increased the amount of exertion. The pulse and its adjustment to exertion being used as an indication for an increase. At discharge the patient could go about the hospital, avoiding stairs, and using as her limitation, the first signs of fatigue. When such appeared, she would go to bed. Soon she became acquainted with the amount of exertion necessary to produce fatigue, and remained within her limits.

How do these drugs produce results? Santesson in 1893 and Hofman in 1915 have shown that quinidine decreased the irritability contractility and rhythmicity of the heart. Due to this action we get a gradual reduction of rate and a returned, normal rhythm.

Lewis believes that quinidine effects both the refractory periods and the conduction time of the circus wave and that if the gap between the crest and wake of the reentrant wave is narrowed and finally closed, fibrillation will cease, and the pacemaker again gain control. Digitalis is the most valuable drug in heart disease. Indications for its use are:

1. Heart failure of congestive type.

2. Auricular fibrillation or auricular flutter with rapid ventricular rate, whether or not muscle failure is present. Digitalis acts in two ways:

First: By depressing conductivity thereby reducing ventricular rate by producing block.

Second: It increases the force of muscular contraction. This action is present in diseased, as well as normal muscle. Also with normal rhythm or pathologic rhythm.

In conclusion: (1) Rest, both mental and physical must be obtained. (2) Morphia is always indicated to produce sleep and relaxation—thereby improving rest.

- (3) Appropriate and suitable diet to maintain nutrition and relieve the heart of the burden of carrying on digestion.

- (4) Relieve edema and congestion by free catharsis and diuresis.

- (5) Two cases of auricular fibrillation reported to emphasize methods of administering quinidine sulphate and digitalis and the results to be desired.

- (6) Definite indications exist for the use of digitalis and quinidine and neither drug should be given indiscriminately.

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*Discussion:* C. J. FISHMAN, M.D.

Dr. Bryan discussed very nicely the management of auricular fibrillation, but as I read his article and listened to him this afternoon I wondered whether the general practitioner understood the meaning of the term auricular fibrillation, and I will take this opportunity of explaining it briefly.

Auricular fibrillation is a type of cardiac irregularity which is not usually primary, but associated with and based upon heart muscle fatigue. It occurs, therefore, in weak hearts and produces a type of irregularity which has no relation to respiration, or to the beats one with another. It may be described as an irregular irregularity and is seen in the so-called "Wild Hearts" in general practice. We have beats which are disassociated as to rhythm. It is distinct from other types of irregularity which may be briefly mentioned as follows:

First, the sinus arrhythmia, which is the most common irregularity in young people, depending upon the respiratory movements, due to alteration of the tone of the vagus nerve. It may be considered a normal youthful type of irregularity, resulting in more rapid beats during inspiration, and slow beats during expiration.

Second, the extra systoles may be described as a disturbance of the sequence of rhythm, in which the auricle contracts too early and often, resulting in misbeats or early contractions. It is a very common type of irregularity in the aged, and is generally not serious unless associated with organic heart disease.

Third, heart block is a type of irregularity in which there is an abnormal mechanism manifested by absence of ventricular contractions, resulting in an abnormally slow heart, most often just one-half the normal rate.

Fourth, paroxysmal tachycardia, on the

other hand, produces a heart rate which, although regular, is very rapid, usually twice the normal rate. Attacks of paroxysmal tachycardia appear suddenly, last for a short period of time, and disappear suddenly. The heart between the attacks is perfectly normal, and the heart muscle usually uninjured.

Fifth, auricular flutter occurs in a heart in which the auricles beat very rapidly, often as high as 250 to 350 per minute, while the ventricles may beat normally. This type is sometimes overlooked clinically, but may be recognized accurately by special apparatus, such as the electrocardiograph.

The three important measures in the management of auricular fibrillation should be emphasized over and over again. The first and most important being a rest, as was so well brought out by Dr. Bryan in his article. The use of digitalis in primary weak hearts acts efficiently and satisfactorily in a certain number of cases. The result is frequently a different type of irregularity, namely, the extra systoles. Quinidine in a certain percentage of the cases acts specifically in settling the cardiac mechanism. I believe, of all measures, rest in bed, by all means, is the most important.

I believe that this is a most timely presentation, and I am glad to have had the opportunity of reading and hearing Dr. Bryan's article.

### THE TREATMENT OF DIABETES\*

ALEXANDER B. LEEDS, A.B., M.D., F.A.C.P.  
CHICKASHA

A rational and satisfactory treatment for diabetes has been developed as a result of the advance made during the last ten years in the problem of this disease.

Diabetes may be due to a disorder of the function of the islets of Langerhans, with a deficiency of their internal secretion, yet it may develop as a result of the fatigue of the islets from an over ingestion of sugars or there may be an inherent weakness of the pancreas itself.

We must not forget that any of a variety of organic lesions, such as the possibility of syphilis, can be the contributing etiology of this disease.

In the treatment of diabetes, the ideal is to keep the blood sugar low; the urine free from sugar and to furnish a diet at once palatable and yet sufficient for the patient's need whatever his station or occupation in life may be.

The management of this treatment should be so simplified that the patient is not forced to spend too much of his time trying to live within his carbohydrate tolerance.

We are all agreed that in nearly all cases of mild diabetes, if the disease is uncomplicated, there is a high sugar tolerance and for this reason these patients do well for years on a reasonable diet and we feel that they should be encouraged to depend upon a real rational diet as long as it is sufficient.

Before starting any diabetic treatment, it is imperative that we discover and eliminate any source of infection in every case of diabetes.

Another suggestion is that in many cases of diabetes, in older or aged persons, there is an exhaustion of the suprarenal glands probably caused by or resulting from the effects of worry, high tension of living or other things peculiar to persons of older years.

As this exhaustion of the suprarenal glands either causes the diabetes or is associated with this condition, it is necessary that this exhaustion of the suprarenal glands be corrected, if possible, either before beginning the active treatment of the diabetes or while this active treatment is being inaugurated.

We recognize that there are two great classes of diabetic patients—those to whom insulin is a necessity and others to whom it is a luxury and as a matter of fact is not needed by this second class.

There is a comparatively small number to whom insulin is a necessity as these do not represent more than one third of the cases of diabetes seen.

Generally speaking, insulin should be given in all cases of diabetes occurring in children and in persons under forty years of age; in all cases of diabetic coma and severe acidosis; in all cases with an infectious process which has caused either a temporary or a permanent lowering of the sugar tolerance; in all cases of proven severity in which there is a necessity for a surgical operation and more especially in the cases in which the sugar tolerance, as determined by adequate dietetic control, is so low as to make efficient living impossible.

The diet in diabetes is one in which the carbohydrates, proteins and fats as well as their quantity is determined on the basis of the body weight of the patient; the severity of the disease, the activity of the patient and the amount of insulin administered if it is necessary for its use in that particular case.

Only from a basal requirement or minimum adequate diet can a rational diet be elaborated for each individual patient so this minimum adequate diet is the prerequisite for any

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

satisfactory treatment.

The determination of this minimum adequate diet as well as the determination of the patient's sugar tolerance can be ascertained by careful dieting; frequent blood sugar estimations and the administration of insulin, in suitable doses, if the careful dieting does not suffice.

We use either the method of preliminary starvation until the urine is sugar free then gradually increase the carbohydrates, proteins and fats until sugar or acetone appears in the urine or dispense with the period of starvation and begin with a very limited diet until sugar disappears from the urine then gradually increase the carbohydrates, proteins and fats until sugar or acetone appears in the urine.

If either the starvation or limited diet fails to remove enough of the sugar from the urine so that there is still any appreciable quantity found then insulin, in small guarded doses, should be given until the urine is sugar free then gradually increase the carbohydrates, proteins and fats until a sufficient and efficient diet has been approximated.

In the use of insulin, the ideal is to keep the blood sugar within normal limits if that patient is to continue to progress satisfactorily.

The use of insulin does not and can not, in any way, replace dietary management nor does it promise a cure but it does improve the mental and physical state of all patients with diabetes who are taking it so that its administration is justified in all cases where a rational diet does not suffice.

The clinical improvement, by the use of insulin, is so striking that patients are more willing to restrict their diet than they were before beginning the use of insulin.

The action of insulin consists not only in enabling the patient to utilize the carbohydrates in the food but it also affords rest to the islet cells in the pancreas.

The more severe the case of diabetes, the more necessary is the use of insulin and the safer is its administration.

One unit of insulin will disassociate or burn two grams of glucose and it is given in quantity sufficient to enable the patient to utilize the diet.

Preferably one dose of insulin is given in the morning and one dose is given in the evening and when the diet is being increased, each step in the increase should be continued for three days before estimating the blood sugar again.

As a general rule, in cases of diabetic coma or severe acidosis insulin should be given in dosage of twenty units and this size dose can be or should be repeated every two or three hours until results are obtained.

In minor ailments, before operation, diabetic patients should go to bed; the diet should be reduced one-third in amount and five units of insulin given or added to the usual dose if the patient has been taking insulin regularly; for we know that insulin has proven to be of great value in tiding the diabetic patient over the risk of an operation requiring a general anesthetic.

Insulin acts favorably on cases of diabetes complicated by tuberculosis so this complication is not a contra-indication for its use.

Diabetic neuritis is sometimes cured by dietetic treatment; use of insulin, if necessary, and eliminating all forms of alcohol.

Local application of the liquid, produced by rubbing together in a mortar equal parts of chloral hydrate and camphor, may relieve the pain of diabetic neuritis.

Metabolin, which is made from the pancreas and yeast, apparently has a similar action to that of insulin and as it is rapidly absorbed when placed in the rectum, it is being consistently tried out in this manner.

We need not emphasize the importance of the report which has been made that a weak alcoholic preparation of the pancreatic enzyme insulin should protect it from disintegration by the gastric juice.

The possibilities of the promise of this advance in the preparation and use of this form is very encouraging for the future.

In conclusion, after the determination of the proper efficient diet, with or without the sufficient dose of insulin, if needed, the patient should be taught how to figure out his needed diet; how to test his urine for sugar accurately; how to administer the hypodermic injection doses of insulin if he is to take insulin; how to recognize the symptoms of too low blood sugar (such as weakness, sweating, tremor, nervous apprehension and disorders of speech) and told that if any of these symptoms appear there should be taken internally, at once, some orange juice, some sugar or some glucose solution. If these symptoms become intensified or serious then two to four lumps of sugar by mouth or one to four cc. pituitrin or fifteen minims of adrenalin 1:1000 subcutaneously are urgently required.

# THE JOURNAL

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### EDITORIAL

#### ABRAM'S FIASCO ENDED

Abrams diagnostic cure-all has been, after most exhaustive investigation, a time wasting process utterly unwarranted, had any honest, well-balanced scientific electrical or medical authority conversant with phases of electro-medical principles, been consulted; declared by the *Scientific American* to be "utterly without foundation in science" for the diagnosis and treatment of disease. "The so-called electronic reactions of Abrams do not exist," says this committee of scientific non-medical experts. As we have noted heretofore, verdict from unbiased, qualified authority, with no possible attachment, unopen to

charges of bias or self interest always heaped on medical authority, regardless of merit and worth, cannot possibly attach to this final report, which disposes for all time the claims of the charlatan advanced in support of this monumental fake. Once again we see passing from the stage of hysterical publicity and dishonesty, a fake which tomorrow will be forgotten, which will give place to something equally impossible, unscientific, a creation merely to impose, for the fleeting moment, upon the credulous and unfortunate, but just as surely as this heartless fake had, a certain element among the so-called "medical profession." Throughout Oklahoma there sprung up overnight members of our medical profession, in every case those generally known to the rank and file of their associates as woefully unqualified and unfitted to assume the place of worth or respect, but unfortunately accepted by the victim of disease by reason of their recognition by the laws of Oklahoma as persons of honor and worth; new prophets, offering hope to those known to be hopeless. It is significant that in many of these instances the "expert medical authority" had previously been engaged in acts of charlatanism, advertisers and "fly-by-nights" were the rule. Though it is regrettable, though we know that their acts are those of heartless imposition upon the ignorant, helpless unfortunates upon whom they always prey; individual or collective protest from the medical profession is almost useless. For that reason investigations from such authorities as the *Scientific American* are of inestimable benefit. No charge of ulterior motive will stand. Now, as we have the final verdict there is no reason why every practitioner, advertiser, quack or culturist operating this device to the injury of the helpless may not be prosecuted just as any other fraudulent operator may be brought to justice. Oklahoma City, Muskogee, Tulsa, Shawnee and other centers house the criminal fakirs in this field. Their activities should end at once. In the meantime we should prepare for the next onslaught born of dishonesty.

#### Editorial Notes—Personal and General

DR. A. V. EMERSON, Tulsa, is attending the New York and Chicago clinics.

DR. H. L. ROBERTS and family, Davidson, visited Missouri relatives in August.

DR. WILLIAM PATTON FITE, and family, Muskogee, are visiting Colorado points.

DR. D. LONG, Duncan, has been appointed Health Officer for Stephens County.

DR. M. K. THOMPSON and family, Muskogee, motored to Colorado, early in August.

OKLAHOMA COUNTY MEDICAL ASSOCIATION will resume meetings on September 27.

DR. and MRS. LEWIS GADDY, Stratford, have returned from a month's vacation spent in California.

DR. and MRS. SHADE D. NEELY, Muskogee, visited old home folks in Mississippi August-September.

CANADIAN COUNTY Commissioners extended their budget for 1924-25 to include employment of a public health nurse.

DR. FLOYD E. WARTERFIELD, Muskogee, motored to the Denver meeting of the American Urological Assn., August 21-25.

OKLAHOMA CITY CLINIC is building a new structure to house the clinic, opposite the Wesley Hospital, costing about \$50,000.

DR. EARL M. WOODSON, Poteau, was married to Miss Faye Scott of Atoka, at Tulsa, on July 5th, 1924, and have made their home at Poteau.

DR. S. N. CHATTERJEE, Muskogee, Captain, Medical O. R. C., attended the Army Medical School at Fitzsimmons Hospital, Denver, August 1 to 16.

DRS. GENERAL PINNELL, G. A. DETAR, M. M. DEARMAN and GEO. W. COLVERT, Miami, were recently posted "A. W. O. L."; cause, a fishing trip; result, chiggers and sun burn, no fish of pathologic extent.

McINTOSH COUNTY MEDICAL SOCIETY met August 12, with the following program: "Osteo Myelitis," Dr. L. I. Jacobs; "Diarrhoea and Dysentery," Dr. G. W. West, with a general discussion, and clinic, and report of cases.

DR. ERNEST BALL, formerly an Oklahoman, infected with "wanderlust," located, for years at Ebano, S. L. P., Mexico, motored back to his first love in July-August. He threatens to demonstrate normalcy by returning and locating in Oklahoma at an early date.

ARDMORE recently had a children's clinic, under the auspices of the Rotary Club, conducted by Drs. Earl D. McBride and A. M. Young, Oklahoma City, assisted by a number of local physicians and surgeons. Sixty-three patients were examined and the proper recommendations made.

MEDICAL OFFICERS RESERVE CORPS. Among some of those attending the course at Fort Sill, August 17-31, were the following: Col. L. C. Willour, McAlester; Lt. Col. F. H. McGregor, Mangum; Lt. Col. P. P. Nesbitt, Muskogee; Major W. W. D. Akers, Hooker; Major Carl Puckett, Oklahoma City; Major O. E. Templin, Alva; Major L. A. Mitchell, Frederick; Capt. D. Armstrong, Durant; Captain A. L. Mobley, Eufaula; Captain C. E. Parker, Dustin; Lieut. J. C. Schlicht, North McAlester; Major C. W. Heitzman, Muskogee.

DR. and MRS. WILLIAM L. KENDALL, Enid, are spending a vacation in Colorado.

DR. and MRS. H. T. BALLANTINE, Muskogee, have returned from Northwestern Pacific points.

DR. C. D. DALE, Caddo, has received the appointment as County Health Officer for Bryan County.

DR. GEORGE W. COLVERT, Miami, has been appointed city physician there, succeeding Dr. J. B. Lightfoot.

DR. EARL YEAKEL, and family, Shawnee, are removing to Oklahoma City, where Dr. Yeakel will establish his practice.

DR. C. M. FULLENWIDER, and family, Muskogee, motored to Colorado (with special reference to Gunnison trout) in August.

DR. FRED G. PRIESTLY, Frederick, returned recently from Chicago where he has spent ten weeks taking a post graduate course.

MAJOR WILLIAM H. BAILEY, Med. O. R. C., Oklahoma City, has returned from active duty at the U. S. Army Fitzsimons General Hospital, Denver.

DR. and MRS. I. C. MORRIS, Shidler, are visiting at Rochester, Minn., where Mrs. Morris is undergoing treatment, and the Doctor taking a post-graduate course.

DR. G. F. WOODRING, Bartlesville Health officer, is "peevd" over three cases of typhoid fever for July. He insists that any cases are too many cases and wants none hereafter.

DR. and MRS. J. I. HOLLINGSWORTH, Muskogee, left August 25 for San Francisco, where they embarked on the 30th for Del Carmen, Pampanga Province, Phillipine Islands, the doctor having accepted assignment with the Spreckels Company hospital.

DR. W. F. LUNSFORD, Poteau, has been appointed full time county health officer of LeFlore County, under the Rockefeller Foundation plan, and is spending a month at Andalusia, Ala., in observation of the health unit there, which is regarded as one of the most efficient in the country.

THE MEDICAL DETACHMENT, 180th Inf. Okla. N. G., attended the National Guard encampment at Fort Sill, under the command of the following officers: Major Andrew W. Harris, Muskogee, Captain Ralph E. Jones, Stigler, Captain John Davis, Stigler, and Captain Charles C. Rose, Atoka, all of the Medical Department.

UNIVERSITY MEDICAL COLLEGE ALUMNI, Kansas City, Missouri, will hold a reunion banquet, Wednesday, October 15, 1924, 6:30 P. M., in the Banquet room of the Kansas City Athletic Club, 11th and Baltimore, Kansas City, Missouri.

During the noon hour of the same day the various classes from 1882 to 1913 inclusive will hold individual class reunion luncheons.

The reunion banquet is a part of the program of the Kansas City Clinical Society, which will convene in Convention Hall, Kansas City, Missouri, October 13-18, 1924.

**JEFFERSON MEDICAL COLLEGE.** In recognition of the far reaching developments of bronchoscopy in the diagnosis and treatment of diseases of the lungs and of esophagoscopy and gastroscopy in the diagnosis and treatment of diseases of the esophagus and stomach, the Board of Trustees and Faculty of The Jefferson Medical College have created a new Chair to be known as the Department of Bronchoscopy and Esophagoscopy. Dr. Chevalier Jackson, formerly Professor of Laryngology in the Jefferent has been elected to the Professorship of the new Department. Dr. Fielding O. Lewis has been elected to fill the Chair of Laryngology vacated by Dr. Jackson.

**STATE BOARD LABORATORY**—under the reorganization of the Department of Public Health of the State of Oklahoma, Henry C. Ricks, M.D., an experienced medical director, is in charge of the State Laboratory and is prepared to serve the State thru the medical profession in the examination of all specimens pertaining to public health, along the lines of communicable disease. Tests which strictly belong to the private practice of medicine will not be undertaken as they belong to the commercial laboratories.

Dr. Ricks will in the near future issue a pamphlet describing in detail the functions of the Laboratory which will be sent to all physicians in the State.

### DOCTOR EDGAR J. ORVIS

A good and useful citizen, whose demise will be felt by many, passed away on August 21st, suffering from valvular heart trouble, with which he had been afflicted for several years. Dr. Orvis, a prominent physician and resident of Blackwell, where he had lived for twenty years, was beloved by all of his colleagues and his friends. He was born at Oakfield, Wisconsin, on August 13, 1854, and received his early schooling there, and at the Toronto University, and graduated in medicine from the University of New York in 1894. Dr. Orvis began the practice of medicine in Wisconsin in 1899 and remained there until his removal in 1901 to Oklahoma. Surviving Dr. Orvis, are his widow, a son, two daughters and two stepsons. The funeral was held from his home under the auspices of Chickasha Lodge No. 109, A. F. and A. M. of which lodge he was a member, as well as of his county and state medical associations.

### DOCTOR WALTER W. ROSSER

Dr. W. W. Rosser, Member of the Staff of U. S. Veterans Hospital, Number 90, Muskogee and tuberculosis expert for that institution died suddenly at Stevenson, Alabama, August 15. The cause of death was heart disease from which he had had premonitory warnings for some time, but by conserving his energies and restrictions he had succeeded, probably in deferring the final end for some time. Dr. Rosser was highly respected for his sterling ability by those acquainted with his capacity in his special field and for his many likable social endowments. He is survived by his widow Mrs. Macie Rosser.

Born at Stevenson, Alabama, May 19, 1876, his life was a very busy one. After graduating from Vanderbilt Medical Department in 1898 he served the DeBeers Diamond Mines Hospital in South Africa as house surgeon, later the Rand Mines at Johannesburg after which he served with the British Army for three years as contract surgeon. It was during this latter service that he acquired exceptional ability as a tuberculosis specialist. His active service with the United States Army began in January

1918, his service including that of the German occupation from which he retired with the rank of Major. He also saw service in China during the Boxer rebellion. He has been with the Public Health Service since his army discharge. The following resolutions were adopted by his associates:

### RESOLUTIONS

Adopted by the Clinical Society of The United States Veterans Hospital, Number 90, Muskogee, Oklahoma, on the death of Doctor Walter W. Rosser.

Whereas; death has called from our midst our honored and respected member, Walter W. Rosser, and,

Whereas, the passing of Dr. Rosser leaves an irreparable void and a feeling of sincere regret and sadness in the hearts of the patients, personnel and staff of the Veterans Hospital, and,

Whereas, during his connection with the United States Public Health Service, the Army, and the Veterans Bureau, he demonstrated his superior worth and ability, at all times radiating kindness, hope and cheerfulness among his associates, to such extent that his untimely passing to the Great Beyond has produced feelings not possibly describable in mere words:

Therefore, Be It Resolved: That the Clinical Society of Veterans Hospital Number 90 record their feelings of sadness, regret and profound respect upon his unfortunate demise; that his death be entered upon our official records as a distinct loss to society, the medical profession, War Veterans and the many friends who deemed it a privilege to know him.

Be it further Resolved: That copies of this be sent to his bereaved family, to the Alabama State Medical Association, of which he was a member and to the Oklahoma State Medical Association.

Roy A. Wolford  
Chas. P. Murphy  
Claude A. Thompson  
Committee, The Clinical Society of U. S. Veterans Bureau Hospital Number 90, Muskogee, Oklahoma.

## DOCTOR JOHN S. HARTFORD

Dr. J. S. Hartford, Oklahoma City, died after a short illness due to apoplexy, August 28th.

Dr. Hartford was born at Cameron, Mo., July 19, 1874. Educated in the schools of Chillicothe and Missouri Wesleyan College, after which he was graduated in Medicine from the Kansas City Medical College, March 1901. After practicing a short time in Kansas City he located at Colony, Oklahoma, moving from there to Oklahoma City in 1908. He rapidly established a large practice in Oklahoma City, becoming one of the leaders in the profession and in his special work—gynecology—also occupying the chair of Gynecology in the University Medical School, member of University Hospital and St. Anthony's staffs, and a consistent member of his county, state and national medical organizations in addition to many others. Dr. Hartford is survived by a widow, two sons and one daughter. Funeral services were conducted at the First Christian Church, Oklahoma City; interment was made in Rose Hill Cemetery. The following resolutions were adopted by his associates in medicine.

The faculty of the School of Medicine of the University of Oklahoma, in session today, called together by Dean LeRoy Long, because of the death of a fellow member, Dr. John Hartford, wish first to extend to the family its heartfelt sympathy; second, to express the loss felt by this Faculty in losing such a beloved and valuable member.

We who were in daily association with Dr. Hartford know he was an upright citizen, a capable and conscientious physician and a Christian gentleman. Our minds being only finite, we cannot understand the infinite wisdom of God in taking away a good man who would seem to have, in the natural course of nature, many years of usefulness before him. However, He knows best.

By resolution adopted in Faculty meeting, the Secretary is directed to spread this memorandum upon the minutes of the Faculty, to send a copy to the press and to the bereaved family.

Committee for the Faculty,  
Dr. Antonio D. Young,  
Dr. Samuel R. Cunningham,  
Dr. Everett S. Lain.

ACADEMY OF MEDICINE  
OKLAHOMA CITY

## Resolutions

"We live in deeds, not years; in thoughts, not breaths; in feelings, not in figures on a dial. We should count time by heart throbs. He most lives who thinks most, feels the noblest, acts the best. Life's but a means unto an end; that end: Beginning, mean, and end to all things—God.

—Philip James Bailey.

WHEREAS death has called from among our membership our much loved and honored member, John S. Hartford, and

WHEREAS, the loss to the Academy of Medicine and to the profession generally of Oklahoma City and the State seems most untimely and is keenly felt, without the realization of the full value of a service which has been taken from our midst—we we resign ourselves

Dr. Hartford's membership in the Academy of Medicine contributed most generously to the interest and the advancement of the organization; and, its membership can not but surely feel and eventually realize the loss of his personal influence, and the sudden termination of his contributions to our profession in the course of the Academy's accomplishments to the benefit of Medical Science.

Therefore, Be It Resolved: By this Academy of Medicine that his loss in our Membership, and in our community, is most keenly and sincerely felt and that the grief and sorrow at his departure is an individual feeling of loss to the entire membership of the Academy; and, in which grief and sorrow, this organization extends words of condolence to his immediate family in this bereavement.

Be It Further Resolved; that a copy of this resolution be placed in the records and proceedings of the Academy; that a copy be given the public press and that a copy be delivered to the sorrowing family of our deceased brother.

(Signed)

R. E. Looney  
Arthur W. White  
C. B. Taylor  
Committee, Oklahoma City  
Academy of Medicine.

**OBSTETRICS and PEDIATRICS**

Edited by Carrol M. Pounders, M. D.  
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**REPORT TO THE HOUSE OF DELEGATES BY  
COMMITTEE APPOINTED BY THE BOARD  
OF TRUSTEES ON ACCIDENTS FROM  
STEARATE OF ZINC DUSTING POWDERS.**  
—American Medical Association.

Twelve cases of the accidental inspiration of zinc stearate dusting powders were reported by Heiman in 1922. One patient died within twenty-

four hours. Three developed signs of bronchial pneumonia, with symptoms of acute toxemia, lasting from two to three weeks, but ultimately recovered. In the remaining eight cases, partial asphyxia was followed by gradual recovery without definite involvement of the lungs.

In response to a request for reports of accidents from stearate of zinc dusting powders, published in The Journal, Feb. 9, 1924, thirty-four cases have been reported, five of which terminated fatally. Eleven reports did not state the date of the accident. Of the remaining cases, eleven have occurred since January 1 of the current year, and all have occurred since April 9, 1919. The youngest patient was three months

old, and the oldest two years. In seven of the cases, somewhat more than one quarter of the total number in which the age was stated, the victims were six months old. The youngest victim was a three months' old baby, to whom a can of the dusting powder had been given as a plaything, and who died in one hour. Accidents most commonly resulted from the sifting out of powder from the can in the hands of the infant, with consequent inhalation, but in some cases the infant is reported as having put the container to his mouth. In one case the lid came off accidentally. In another, and older child threw some of the powder into the infant's face.

The symptoms were in all cases immediate, the severity depending on the amount inhaled and the amount lodged in the mouth and nostrils. In typical cases there were asphyxia and evidence of collapse. The persistent collapse seemed strongly suggestive of a toxic effect, possibly a zinc (ZN) poisoning. Pneumonia followed in some cases. In one case, the patient being an infant three months old, death occurred in one hour. In the several cases in which recovery took place it was usually complete in about two weeks. It may not be amiss to mention that powders which require relatively large sifting holes for convenient use are much more potent for harm than those of smaller size, and all cans brought to our attention which contained zinc stearate alone or a large proportion of zinc stearate required the large holes.

#### Conclusions

Your committee can find no scientifically controlled evidence to justify the statement that zinc stearate powders as used in the nursery possess any advantage over other well known powders, such as talc and powders of mixed composition.

The committee is of the opinion that for the protection of the public, zinc stearate powders and powders containing zinc stearate, for toilet and nursery use, should be sold only in containers with permanently attached covers. The shape of the cover should be such as to render it impracticable for an infant to place the top in his mouth. The cover should be kept automatically and positively closed whenever the container is not in use; for instance, by a slide or valve closing the holes at all times, except when operated by firm pressure by the hand of the person using it, the slide or valve being held in position by a spring sufficiently strong that an infant cannot operate it. Conspicuous, clearly-worded caution labels should be placed on all containers of stearate of zinc dusting powders for toilet or nursery use, warning users to keep such containers out of reach of infants and children.

#### Recommendations

Your committee recommends that the Board of Trustees be authorized to continue the work begun by it to induce manufacturers and packers of stearate of zinc dusting powders to market them in safe, properly labeled containers, as described above, or in some equally well safeguarded container, and to educate the public with respect to the danger inherent in such powders; and that the board be authorized further, if in its judgment it becomes necessary, to seek federal and state legislation to insure the marketing of such powders in the manner described.

#### THE THERAPEUTIC VALUE OF THE BACTERIOPHAGE IN TREATMENT OF BACILLARY DYSENTERY.—Ralph C. Spence and Earl B. McKinley, *Southern Medical Journal*, August, 1924.

The authors review the literature on the clinical

application of the bacteriophage. They report four cases of chronic suppurative wounds treated by local application of the bacteriophage with good results. The infection was due to the staphylococcus aureus in each case. A case of pyelitis having the staphylococcus aureus as the etiological factor cleared up promptly after the injection, at three day intervals, of four doses of the bacteriophage in amounts of eight mls each. A streptococcus abscess of the lung was successfully treated locally—after rib resection. A case of chronic dysentery due to bacillus dysenteriae Flexner was treated with excellent results.

Twenty cases of dysentery in children ranging in age from four months of six years were treated—the bacillus dysentery having been isolated from each case. They were put on a protein diet and given ten mls of the bacteriophage three times daily. In those cases where a second stool examination was made the bacteriophage was found to be present and the dysentery organisms were not found. The average duration of the disease before treatment was begun was 3.1 days. The average minimum number of stools per 24 hours was 20.2—the most of which contained blood and mucus. Of the series, 18 recovered and two died—a mortality of ten per cent. Of the cases that recovered the average time between the beginning of treatment and complete recovery was 5.8 days. There were no recurrences. The appetite became normal when the symptoms subsided.

Contrasted with this series was a series of twelve cases treated in the hospital (the preceding series were private cases) during the same month and during the same epidemic. The treatment here consisted of protein milk, skimmed milk and barley water, bismuth, sodium bicarbonate, hypodermoclysis, intraperitoneal injections of glucose and normal salt solution and colonic irrigations. The ages here varied from twelve months to two years. Five of these cases died—a mortality of 40 per cent. Of those that recovered, the average time between admission to the hospital and complete recovery was 12.8 days.

The conclusions are:

(1) The therapeutic use of the bacteriophage in the treatment of acute bacillary dysentery in children will greatly lower the mortality. (2) The earlier in the course of the disease the treatment is begun the better are the chances for an early recovery. (3) In those cases which recover—the treatment with the bacteriophage will greatly shorten the duration of the disease.

#### THE EFFECT OF FLUID ON THE TEMPERATURE AND BLOOD CONCENTRATION IN THE NEW-BORN WITH FEVER.—H. Bakwin, M.D.; R. M. Morris, M.D. and J. D. Southworth, M.D., *Amer. Journal Diseases of Children*, June, 1924.

It has been previously shown that a close relationship exists between fever in the new-born and dehydration. Also in afebrile new-born infants the protein concentration of the blood is fairly constant—being around six and seven per cent—in those with fever it is usually above 7.5 per cent and often as high as 9 per cent.

The writers studied the effect of fluid therapy on the temperature and blood concentration of the new-born with fever. Approximately 35 c.c. of the fluid per kilogram of body weight warmed above the temperature of the baby, were given and the temperature and blood concentration determined repeatedly before and after the fluid administration. The fluid was given orally (gavage), hypodermically and intraperitoneally. Tap

water, saline and glucose solutions were used. The babies were kept well covered during the experiments to avoid a fall in temperature due to cooling of the body surface.

In cases where fluid was given by mouth (by gavage) a prompt fall in temperature and blood concentration followed with great regularity. The temperature usually became normal within an hour. The drop in serum protein concentration usually amounted to about 1 per cent. The fall in the red cell count was prompt. Plain water and 5 per cent glucose were used with equally good results. When fluid was given hypodermically or intraperitoneally (30 to 60 c.c. per kilogram) the effect on the temperature and blood concentration was neither so marked or so prompt as after gavage, and occurred much less regularly. Usually a gradual drop of temperature from 0.5 to 1 degree c. in two hours occurred. The drop in the serum protein concentration rarely amounted to over 0.5 percent. of protein. In only three of sixteen babies studied after fluids was given by these routes did the temperature reach normal during the period of observation, which usually lasted about two hours after the fluid was given.

Infants with fever due to various infections were given water by gavage. There was only a slight fall in temperature and the plasma dilution was not so marked.

These experiments emphasize the greater efficiency of the oral administration over the subcutaneous or intraperitoneal in reducing the concentration of the blood and lowering the temperature in the new-born with dehydration. Similar results have been obtained in older infants dehydrated as a result of severe diarrhea. In these cases water or 5 percent glucose solution was dripped into the stomach at a slow rate by means of a tube inserted into the stomach through the nose.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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**STUDIES ON THE RESPIRATORY ORGANS IN HEALTH AND DISEASE.—6. The Significance of the Vital Capacity Test in Pulmonary Tuberculosis, Bronchial Asthma, Pneumonia and an Acute Infection Outside the Respiratory Tract. J. A. Myers, Ph.D., M.D. The Archives of Internal Medicine, November, 1922.**

In this study vital capacity readings were taken in 335 cases of suspected tuberculosis. Stereoscopic plates were made in 210 cases. The cases were classified both on a basis of physical findings and on a basis of X-ray examination. In the majority of cases the vital capacity was found to be decreased in proportion to the extent of involvement as revealed by both physical signs and the X-ray.

Pulmonary cavities were diagnosed by X-ray in thirty cases. The average vital capacity for this group was sixty-four, the range thirty-one to one hundred nine percent of the normal. The nine cases having a spontaneous or artificial pneumothorax all showed a reduction of approximately fifty percent.

Twenty cases of bronchial asthma were studied. The vital capacity was found greatly reduced during acute attacks but returned to normal when the

attacks subsided in all cases except four with emphysema and three beyond the age of fifty.

Observations were made on twenty pneumonia patients. The lowest reading was seventeen per cent, this was taken on the fifth and sixth days of disease. The highest reading was ninety-three in another case at discharge. The lowest readings were obtained at the time of the crises. Very little relation was found between the extent of involvement of lung tissue and the reduction of vital capacity.

This test is a valuable aid in the early diagnosis of pneumonia as it probably reduces the vital capacity more from the beginning than any other acute respiratory disease. It also gives much information as regards the clearing up of the lesion and is of great value in guiding the patients' activities. They should remain quiet until it is at least ninety percent. An unresolved condition or complication is shown by a failure of the vital capacity to gradually increase.

Readings were made on sixty patients suffering from paratyphoid fever. Only fifteen percent of these patients were found to have vital capacities below normal limits. Fifty percent of these cases had such complications as pleurisy or lung involvement. The chief value of the test in this non-respiratory infection was found to be in suggesting such complications.

**STUDIES ON THE RESPIRATORY ORGANS IN HEALTH AND DISEASE. 4.A Comparison of Vital Capacity Readings and X-Ray Findings in Pulmonary Tuberculosis.—J. A. Myers, Ph.D., M.D. The American Review of Tuberculosis, January 1922.**

The spirometer was invented by John Hutchinson in 1846. He took readings on some 2000 men and established a normal lung capacity for men of a given age and size, his object being to contribute a method of detecting disease. He made a comparison of the vital capacity of healthy men with that of diseased men of the same age and size. His results were similar to those obtained today.

Garvin, Lundsgaard and Van Slyke in 1918, and Dreyer and Burrell in 1920 all find the vital capacity materially decreased as a result of pulmonary tuberculosis.

Myers presents here a study on a series of 101 cases appearing for examination because of definite symptoms, known exposure, or previous diagnosis of pulmonary tuberculosis. In each case a careful history was taken and a physical examination of the lungs made. While he feels that the number of cases is too small to justify the drawing of final conclusions he considers the vital capacity test a valuable aid in the diagnosis of active pulmonary tuberculosis.

A reduction of fifteen percent is usually of clinical significance. As other pulmonary and cardiac diseases may cause such a decrease, x-ray plates and further examinations and tests must be employed. As there is considerable individual variation in normal lung capacity due to occupation, mode of living and past physical training, spirometer readings are most valuable in a person whose normal capacity has been established when in good health. Otherwise, the reading might appear normal and still be reduced several hundred cubic centimeters. The vital capacity test is especially useful in determining the severity of the lesion as a very small severe lesion may reduce the lung capacity in one case more than a low grade extensive lesion in another case. Its

most valuable service, however, is in following the course of disease after the diagnosis has been made. This instrument registers an increase in lung capacity as the disease comes under control, and a decrease in those cases growing progressively worse. The spirometer measures the ability and power of the lungs to function, while the X-ray records the nature and extent of the disease.

#### THE MANAGEMENT OF THE TUBERCULOUS PATIENT.—J. A. Myers, Ph.D., M.D. The Journal-Lancet, December 1, 1922.

All cases of active pulmonary tuberculosis should be sent to a sanatorium if at all possible. While good results may be obtained from home treatment it is very difficult as it is hard to educate both family and patient and to obtain their co-operation. Much time should be spent during the period of rest in the education of the patient as this is one of the most important factors in his treatment.

Heliotherapy is of great value in selected cases but must always be carefully prescribed and regulated and used always in connection with rest.

Excellent results may be obtained from artificial pneumo-thorax in those cases to which it is suited. It usually makes the prognosis about fifty per cent more favorable.

Postural rest is used successfully in many cases unsuited to pneumo-thorax.

Rest and posture are most important in the treatment of pulmonary hemorrhage. Artificial pneumo-thorax is often used with good results in otherwise uncontrollable hemorrhages.

#### TEACHING NORMAL CHEST FINDINGS TO MEDICAL STUDENTS.—J. A. Myers, Ph.D., M.D. The American Review of Tuberculosis, October, 1923.

The course in the normal chest was first offered at the University of Minnesota during the fall of 1921. This course was organized because there appeared a real need for a course covering the findings in the normal living chest to bridge the gap between the laboratory and the clinical subjects. This need was clearly shown by many junior and senior medical students and recent graduates expressing themselves as being rarely certain of their chest findings, especially the lungs.

The work consists of a brief review of the anatomy and physiology of the chest, physical examination (inspection, palpation, percussion and auscultation) functional tests and x-ray findings in the normal chest, also examination of the chests of obese and senile individuals and children.

The final examination consists of the examination by the student of a patient with definite pulmonary disease and the report of any deviation from the normal that he has detected.

While the students at first do not know how to interpret their abnormal findings, they do know that such findings do not exist in normal lungs and from this point soon and easily learn differential diagnosis.

### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

#### A BACTERIOLOGIC STUDY OF EXTIRPATED TONSILS.—Louis A. Julianelle, Ph.D., Philadelphia, Penn.

Tonsils play a definite role in focal infections. Series consists of 147 patients who had tonsils removed for hypertrophy or septic conditions.

Hemolytic streptococcus.....	90.4 percent
Staphylococcus.....	62.5 percent
Streptococcus viridans.....	31.2 percent
M. catarrhalis.....	19.7 percent
B. influenza.....	17.0 percent
Pneumococcus.....	8.8 percent
B. mucosus.....	5.4 percent
B. diphtheria.....	4.0 percent
Non-hemolytic streptococcus.....	1.3 percent

Staphylococci and M. Catarrhalis are considered normal inhabitants of the throat and only occasionally are they pathogenic.

The observation of the author that, "These organisms were isolated from within the tissue of diseased tonsils, so it is reasonable to assume that they were concerned in part in the production of the abnormal condition," is well taken. Why the B. mucosus is only regarded as a saprophyte simply because it happens to be found in a relative small per cent of cases (5.4 per cent) is not easily understood. B. diphtheria which appears frequently in normal mouths and reported four per cent in this series has been proven pathogenic or of a virulent type in about 15 per cent of the cases in which it is present. These cases, at least, should be considered pathogenic. It is very difficult to say just how much effect one or another organism has or may have but it would appear unwise to base any such deduction on its numerical or per cent incident alone.

### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

#### THE CAUSES OF PERSISTENT OTORRHOEA AFTER A SIMPLE MASTOIDECTOMY.—Emerson, F. P.: Ann. Otol., Rhinol., & Laryngol., 1924, xxxiii, 214.

From the patient's point of view, persistent otorrhea following a mastoid operation means an unsuccessful result. The surgeon feels or should feel that there has been some fault in his operative technique or dressing. The causes of a persistent otorrhea are classified by the author as follows:

1. Lack of surgical judgment in the after care.
2. Too early removal of the mastoid cortex before infection has been limited by a leucocytic barrier. This was more frequent before the days of the X-ray than at present. Rarely is it necessary to interfere surgically before a week from the time of an early incision of the membrana tympani.
3. Incomplete exenteration, especially the deep layer of the posterior canal cells.
4. Too active surgery in the region of the adi-

tus which delays the walling off of the middle ear and exposes the mastoid cavity to re-infection.

5. Failure to recognize the origin of the infection such as the infection of the nasal sinuses. Re-infection of the mastoid may occur from such sources.

6. Arrest of tissue repair due to poor resistance of the patient.

7. Osteomalacia.

8. General systemic conditions due to syphilis or tuberculosis.

#### INTRASEPTAL IMPLANTATION IN ATROPHIC RHINITIS.—Pollock, H. L.: *Ann. Otol., Rhinol., & Laryngol.*, 1924, xxxiii, 205.

In the treatment of atrophic rhinitis the author uses implants from the nasal septal cartilage of the donor. An incision is made in the mucoperichondrium of the septum and the membrane carefully elevated, care being taken not to tear the membrane as this defeats the purpose of the operation. The cartilage transplant is as large as possible and is brought in contact with as much of the elevated membrane as possible, in order to insure proper nourishment. The incision is closed with a small suture. It is preferable to operate upon only one side of the nose at one operation and then wait two or three months before operating upon the opposite side.

In cases which have been under observation for three years the implants are still approximately the same size as when first implanted.

#### FUNDAMENTAL CONSIDERATIONS UNDERLYING ROENTGEN THERAPY OF TONSILS.—Lewis, E. R.: *Ann. Otol., Rhinol. & Laryngol.*, 1924, xxxiii, 198.

Lewis is of the opinion that some of the arguments favoring roentgen-ray therapy of tonsils are misleading and dangerous as the knowledge of some practitioners and of patients relative to physiology is not sufficient to protect them against misconceptions.

The object of X-ray treatment is the destruction of lymphoid tissue. In the author's opinion it causes destruction of surrounding tissue and of the lymphatic tissue below and beneath the tonsil.

The large size of the tonsil does not necessarily indicate disease; often apparently normal tonsils are large. The tonsil serves as a protector against infection in the same manner as the deeper cervical lymphatics and its destruction in the absence of definite evidence of disease is unwarranted. Frequently the tissue becomes enlarged to take care of a temporary infection.

The employment of such a powerful agent as the X-ray by those unfamiliar with the physiological and pathological fundamentals of the area in which they are working is dangerous.

#### A STUDY OF THE BACTERIOLOGY OF THE NORMAL AND INFLAMED CONJUNCTIVA WITH SPECIAL REFERENCE TO THE PRESENCE OF STREPTOCOCCUS AND PNEUMOCOCCUS.—McKee, S. H.: *Canadian M. Ass. J.*, 1924, xiv, 216.

McKee reaches the following conclusions:

1. The normal conjunctiva may harbor pathogenic organisms causing no symptoms.

2. A major surgical operation should never be performed upon the eye without a previous care-

ful examination of the lachrymal fluid for pathogenic organisms.

3. For the thorough examination of the conjunctiva cultures are necessary.

4. Examination by smear alone often gives negative findings in cases in which pathogenic organisms would be easily demonstrated by other bacteriological methods.

5. Pathogenic micro-organisms, such as the streptococci and pneumococci, are best demonstrated by use of blood-sugar plates. This method is simple, and by means of it the presence of the streptococcus and pneumococcus may be easily demonstrated in from twenty-four to forty-eight hours.

#### INDICATIONS FOR AND CONTRAINDICATIONS TO TONSILLECTOMY IN ADULTS.—Smith, S. MacC.: *Therap. Gaz.*, 1924, 3 s, xl, 13.

The tonsils should be carefully examined and the color of the tonsil as well as the pillar should be noted. An attempt should be made to determine if free pus can be expressed from the tonsil or caseous matter. Small tonsils may cause greater disturbance than very large tonsils. A tonsil that contains free pus is a menace to health and should be removed whether it be large or small. The removal of extremely large tonsils is justified even though they do not show any definite evidence of disease the obstruction to swallowing and breathing is sufficient. In diphtheria carriers negative culture may be obtained within a short time after tonsillectomy. In the case of persons who are subjected to repeated attacks of tonsillitis, quinsy and frequent colds associated with sore throats, removal of the tonsils is indicated as a preventative measure.

Such general conditions as rheumatism, headaches, excessive fatigue, vertigo, etc., may be due to absorption of toxic material but the foci of infection should be carefully searched out.

Tonsillectomy is contra-indicated when (1) nothing is apparent in the tonsils to indicate that they are directly or indirectly the focus of infection. (2) During the progress of acute infections; (3) in haemophiliacs; (4) when the Wassermann reaction is positive.

#### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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#### THE RATIONAL TREATMENT OF FRACTURES OF THE UPPER END OF THE HUMERUS: REPORT OF END-RESULTS.—James Warren Sever. *Journal A. M. A.*, June 2, 1923, p. 1603.

Author emphasizes the absolute necessity of the abduction treatment of fractures of upper end of the humerus and notes the generally poor results obtained in these fractures as a result of the usual method of treatment with reference to subsequent function. He declares that better results will be obtained in less time if traction following the reduction of the fragments is used in the abducted and outwardly rotated and elevated position rather than by using the older and usual method which employs the shoulder cap, sling, and Velpeau bandage.

Classification of Fractures of Upper End of Humerus.

Class 1. Simple fracture of greater tuberosity without displacement: A. With upward and out-

ward rotation of fragment, may be associated with dislocation of shoulder.

Class 2. Simple fracture of surgical or anatomic neck without displacement, or with impaction of fragment: A. With displacement of fragment, but without dislocation of head: B. with displacement of fragments and complete dislocation of head, generally subcoracoid.

Class 3. Fracture of neck of humerus, generally comminuted, with fracture of shaft, without dislocation of head.

#### Conclusions

These points are essential in the treatment of fractures of the upper end of the humerus.

1. Anatomic restoration of fragments is best obtained by abduction, outward rotation, and elevation of the humerus.

2. Traction in this position is essential for from four or five days to two or three weeks.

3. A satisfactory ambulatory splint may be employed rather than bed treatment.

4. Better and more quickly obtained functional results may be secured by this method than by any other.

5. Operation, except in certain cases of fracture dislocations, is generally unnecessary to restore fractured surfaces.

#### VERTEBRAL AFFECTIONS. LOW BACK PAIN.

—Southern Med. Jour., June, 1923, p. 478.

Author concludes that if one does not find consistently guarded movements, definite limited motions of lumbar spine, or persistent and consistent faulty attitude or deformity, there can be little, if any, disability due to the alleged injury or disease of the spine or sacro-iliacs.

He gives five definite causes for low back pain: (1) trauma, including strains, sprains, fractures, dislocation, etc.; (2) faulty posture, with relaxed ligaments and muscles; (3) diseases of the spine and sacro-iliac joints; (4) intra abdominal and pelvic pathology; (5) skeletal malformations, defects, and deformities. Treatment is not discussed.

#### SPONDYLOLISTHESIS.—S. Kleinberg. *Annals of Surgery*, April, 1923, p. 490.

In this article, the author emphasizes three points: (1) the condition occurs more frequently in males than we have heretofore believed; (2) the lesion presents a radiographic appearance which is pathognomonic, and (3) trauma is frequently the direct cause, or at least, a very important factor, in its etiology.

The fifth lumbar vertebra is tilted forward so that its superior surface is directed upward and forward. This inclination has been assumed to be a weak point in its relationship with the sacrum. The radiographic appearance of the lumbosacral region varies according to the location of the X-ray tube in relation to the last lumbar vertebra. In a normal spine the lumbar vertebrae all appear as quadrilateral shadows in an antero-posterior view of the central rays pass through the lumbosacral region. If the tube is opposite the dorsal region all the lumbar vertebrae appear rectangular except the last one. The area occupied by the fifth is diminished and one sees two oblong masses joining medially at an obtuse angle. In spondylolisthesis, with the last lumbar vertebra dislocated anteriorly, in a front view of the patient we are looking at the superior surface of the last lumbar vertebra, and this condition can be detected in an antero-posterior X-ray. A lateral

view will clinch the diagnosis, but in the very obese this is difficult or impossible to get.

It has been argued that such a severe lesion could hardly be the result of the degree of trauma usually mentioned by these patients. Probably these patients have an anatomical or developmental defect in this region, but there is evidence to support the idea that trauma is the primary etiological factor.

#### SACROILIAC ARTHROSIS OBLITERANS.—By Edward S. Blaine, M.D. *Am. Jour. of Roentgenology*, March, 1923.

Blaine presents facts acquired from 1800 cases, 18 of which present unusual changes in the sacro-iliac joints. Symptoms enumerated are—"dull pain, soreness and stiffness of the back, with uncomfortable feeling in the lower spine," coming on gradually, progressing for several months to a year or more. Incipency indefinite, movement of spine restricted. Pathology and etiology not stated except that it is an infectious osteo-arthritis.

Joints changes—destructive and constructive progress, joint cartilage is absorbed, joint is fused and joint lime disappears.

In his X-ray differential diagnosis, he mentions septic arthritis. This condition is undoubtedly a septic arthritis and of the hypertrophic osteo-arthritis type. It is not necessary to differentiate this from tuberculosis of the sacro-iliac joint.

### BOOK REVIEWS

MODERN METHODS OF TREATMENT By Logan Clendening, M. D., Assistant Professor of Medicine, Lecturer on Therapeutics, Medical Department, University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's and St. Mary's Hospitals, Kansas City, Mo. with Special Chapters by Drs. H. C. Anderson, J. B. Cowherd; Carl O. Rieker; E. C. Neff; E. H. Skinner and E. R. DeWeese. Cloth, Illustrated, 692 pages, Price \$9.00, C. V. Mosby Company, St. Louis, 1924.

Of all dry things and reiteration of monotony, treatises on medicine are supposed to head the list. If this is true the rare exception to that state of medical literature at once, and deservedly, attracts attention and merits unusual praise and recognition. Surely few will accord any other recognition to this work by Dr. Clendening, every page of which is carefully arranged and presented in rare and entertaining style. We believe few practitioners of medicine can read this work without having wide and new paths of thought called to his attention. Few will read it without receiving great benefit.

MANAGEMENT OF DIABETES. By George A. Harrop, Jr., M. D. Associate in Medicine, College of Physicians and Surgeons, Columbia University and Assistant Visiting Physician, Presbyterian Hospital, N. Y. Paul B. Hoeber, New York, 1924. Price \$2.00.

EAT YOUR WAY TO HEALTH. By Robert Hugh Rose, A. B., M. D., 12mo. Cloth. 246 pages. \$2.00 net; Funk & Wagnalls Company, Publishers, New York.

THE SURGICAL CLINICS OF NORTH AMERICA (Mayo Clinic Number - April 1924) The Surgical Clinics of North America (Issued serially, one number every other month). Volume IV Number 11 (Mayo Clinic Number - April 1924) 295 pages with 88 illustrations. Per Clinic year (February 1924 to December 1924). Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

THE SURGICAL CLINICS OF NORTH AMERICA (Philadelphia Number) The Surgical Clinics of North America (Issued serially, one number every other month). Volume IV Number 1 Philadelphia Number February 1924) 302 pages with 90 illustrations. Per Clinic year (February, 1924 to December 1924). Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

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# THE JOURNAL

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### WHAT THE GENERAL MAN AND THE PEDIATRICIAN SHOULD KNOW ABOUT CHILDHOOD DISEASES OF THE EYE, EAR, NOSE AND THROAT\*

HOWARD S. BROWNE, M.S., M.D.,  
PONCA CITY, OKLAHOMA

In presenting this paper before this section, I realize that perhaps, I will not present anything new to you gentlemen, but I may be able to call to mind the importance of a few diseases which may have been neglected by you for the reason that they are classed as special troubles, and thus are not so interesting as your own line of work. If you can be made to realize that the general practitioner more than any other must be a specialist in all lines, and should recognize certain condition early, and if needed refer them to the proper specialist, then my purpose will have been accomplished, and I will feel well repaid for my efforts.

The average physician is not enthusiastically interested in the eye and the ear, due largely to the failure of the undergraduate schools to provide adequate instruction in these subjects, with the result that the graduate in medicine is insufficiently prepared to cope successfully with even the ordinary disorders which fall very properly within his province. A factor which has made otology in particular unpopular has been the almost universal tendency of the laity and the profession to neglect all but the most obvious and painful ear affections, until it is too late for even the specially trained otologist to handle them with any possibility of securing brilliant or satisfactory results. The tendency to neglect the ears is almost as common among the intelligent and well-to-do as among the indigent.

The responsibility for the prevention of ear diseases in common with all other beneficent movements for health reform, rests primarily with the medical profession, and this responsibility falls with much greater weight upon the man in general practice, than upon the otologist; for it is the former

who, through frequent and intimate contact with the many is alone in a position to give help and advice at a time when it will be most productive of results.

Public interest has for a long time been actively concerned in the conservation of vision, and nearly all states have laws to prevent ophthalmia neonatorum, and to safeguard the eyes in industrial plants, but in spite of this fact every one of us know of cases of neglect both on the part of the parents, the physician or the employer, which has resulted disastrously for the one most vitally concerned.

I would like to discuss with you for a few minutes, some specific diseases which are common in childhood, but which do not always receive the care which they should have. Taking up the eye first we might give a little thought to the common disease of childhood, "Pink eye," so well known and so well neglected. It is characterized by a profuse amount of pus, is rapidly contagious and may lead to corneal ulcers with loss of vision, yet there are few oculists who have not seen iritis, keratitis and even foreign body on the cornea diagnosed as "pink eye" by the family physician, the druggist, and the all wise neighbor who has a remedy for everything from ingrowing toenails to a bad disposition. We know that Zinc Sulphate is practically a specific for the Koch-Weeks Bacillus Conjunctivitis, and yet how many of you are using argyrol or boric acid with little or unsatisfactory results.

To mistake iritis or even foreign body in the cornea for "pink eye" is a crime none of us should be guilty of, and the patient may be blind for life through our carelessness.

Trachoma is another childhood disease which is often mistreated and neglected. The little patient is given some argyrol or yellow oxide ointment, and told that it is only a case of follicular conjunctivitis, and it will get well in a short time. When the case does get to the oculist, there may be irreparable damage from ulcers of the cornea and pannus. If in doubt as to the diagnosis in trachoma, and you cannot get your patient to the specialist, treat it as trachoma and keep it under observation at least. These cases do not take care of themselves. They need treat-

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

ment, and need it in time to save the eye. Spasmodic treatments and home remedies will not suffice, and since you are the men who see these cases early it is your duty to emphasize the importance of continuous and prolonged treatment until a cure is effected in order to avoid the sequelæ which inevitably result from neglect of this disease.

I cannot leave the discussion of the eye diseases without mentioning *Ophthalmia neonatorum*. This as you know is a disease of the eye occurring at or shortly after birth, just at the time when the pediatrician takes charge of the infant. In spite of our laws requiring the silver nitrate treatment at the hands of the physician in charge there often occurs a case where it is neglected. Dundas (1) reports a case of *ante partum purulent conjunctivitis* which died on the tenth day in spite of the usual treatment, which shows that not only loss of vision but loss of life may result from this disease.

Another frequent trouble seen by the "other fellow" before the oculist sees the case is poor vision, including squint. These youngsters may not know they do not see well, the parents may not know it, and the teacher sends a note home that Johnnie is not getting along well in school and cannot see the blackboard. If he falls into your hands you owe it to him to make sure that his vision is alright, or if it is a case of squint that he is sent to the proper specialist for the treatment. He should not be dismissed with the injunction that a dose of castor oil is all he needs, and that he will outgrow the "cross eyes." Those cases of squint which are outgrown, we are sorry to find have done so at the cost of vision in one eye, which neither nature nor the best oculist can remedy. A little timely, conscientious advice at the proper time may mean all the difference in the world to Johnnie insofar as his eyesight is concerned.

#### THE EAR

The most frequently met disease of the ear in childhood, and I may say a frequently neglected one, is acute otitis media. In these cases it is imperative that an early diagnosis be made. An early paracentesis of the drum is necessary to save irremedial damage. Nicholson (2) states that influenza is the commonest cause of acute otitis media, and in most cases of the acute suppurative type. The infection may involve children from birth to adult life, but is especially frequent in infants. The infection may be due also to the streptococcus, the staphylococcus, pneumococcus and Klebs-Loeffler bacillus. Infection in the naso-pharynx enters and trav-

els along the Eustachian tube to the middle ear. All cases with profuse purulent discharge involve the mastoid. The pus, if not evacuated by operation, in most cases ruptures through, and causes sloughing of the drum membrane, a damage which cannot usually be repaired. This takes place in from one to four days in severe cases; in mild purulent cases from ten to fourteen days, discharging profusely in from one to two weeks, then subsides. The most constant symptom of acute otitis media is temperature ranging from 100 to 106. Next in importance is pain, although there are cases of acute purulent otitis media with early diagnosis and prompt treatment, recover without any complications or subsequent involvement of hearing.

I would like to suggest that an "ear-ache" which lasts from twelve to thirty-six hours is a likely case for the otologist. It is well known and favorably remarked that due to the early and conscientious diagnoses being made by the general practitioner and the pediatrician, nowadays there are not nearly so many cases of mastoid operations as in previous years, when an ear ache was a necessary evil, and early paracentesis properly done, a rarity.

May I remark in passing that chronic otitis media is a case for the specialist and should not be treated by any one else. Even with the co-operation of the patient and with the best efforts of the otologist, these unfortunate cases do not terminate happily, as to hearing. It might not be amiss to remind you that mastoiditis does occur in early infancy, notwithstanding a general belief to the contrary. Nicholson reports having seen eight operative cases in infants from nine to fifteen months of age, during the year 1920. All had perfect recoveries by early operation, with no impairment of hearing.

The sad side of the picture you all well know. The earache stopped of its own accord; the pus came and is still coming. It may be one year or ten years later, but it is still coming. It may be that the child got better of the pain but now it is awful sick and there is a swelling behind the ear and a tender spot over the mastoid. These are the cases I would warn you not to let your carelessness or indifference lead you into. The otologist does not want them at that stage, but would rather you had called him early, and thus possibly have avoided the miserable complications which may follow a simple "ear-ache."

#### THE NOSE AND THROAT

Adenoids and tonsils we have with us al-

ways, but because such is a fact is no reason that they should be indiscriminately removed. Benjamin (3) states that grinding of the teeth by children is a most important symptom of adenoid growth. It may be the only symptom present, and is very rare in children not suffering from adenoid growth. Out of 271 children with adenoids in whom grinding of the teeth was a prominent symptom, 219 were freed from this following operation, 24 were improved and 28 derived no benefit.

When to remove the tonsils and adenoids is a matter that should be of much concern. Heiman (4) makes a plea that in selecting cases for the removal of tonsils and adenoids we should be guided by safe and conservative principles. If there are obstructive symptoms, mouth breathing, snoring at night, with no evidence of a high arched palate as the cause of obstruction, the adenoids should be removed. If there is a persistent nasal discharge that does not yield to the usual therapeutic measures and in the absence of a sinusitis, the adenoidectomy should be performed. If the tonsils are sufficiently large to cause obstruction, difficulty in breathing or swallowing, tonsillectomy is indicated. Or if there is frequent recurrent appearance of cheesy material in the crypts, foul odor of the patient's breath or persistent cervical adenitis, tonsillectomy is indicated.

The age at which to operate depends upon the case. Adenoids may be removed without anesthesia, in infants a few months old. Freeman (5) advocated relief of adenoid obstruction in infants under two years of age, because they do not have the intelligence that leads older children to seek relief by a wide open mouth. Neglect to operate in these cases sometimes leads to reflex conditions, failure to gain in weight, restlessness, convulsions, asthma and eczema. Cohen (6) states that tonsils should not be removed before the age of two years unless some special indication exists. It is a well known fact that children who have had their tonsils and adenoids removed rarely develop mastoiditis. It is also recognized that chronic ear suppuration may in many instances be cured by the removal where necessary whenever the middle ear discharge did not stop in three weeks.

#### SINUSITIS

Phelps (8) states that a diseased sinus may

produce local symptoms, or it may act as a focus and produce general symptoms. Every child with meningeal symptoms, an anemia, increased temperature of unknown origin, or with asthma or nephritis, pyelitis, arthritis, endocarditis, headaches, or long standing colds, bronchitis, indefinite gastro-intestinal symptoms or cyclic vomiting, should be very carefully examined for sinusitis. The most frequent local symptoms are nasal discharge and headache. If it can be established that the headache decreases when the discharge begins, or the headache is worse in the morning, or on bending the head forward, it is suggestive of sinusitis. Sneezing is said to be a common symptom. Tenderness over the sinus, swelling of the eyelids, of cheeks, and fistula in the upper or lower lids are suspicious signs of this trouble.

The diagnosis of paranasal sinus disease in young children and infants is sometimes very difficult. L. W. Dean (9) who has done extensive work on this subject, has devised various routine procedures which he uses to diagnose involvement of the different sinuses. The X-Ray is the most important in this work as it shows to what degree the sinuses are developed and at the same time gives some information regarding their pathology. Ordinarily the ethmoid sinuses are always developed at birth, the maxillaries are almost always present, while the frontals usually appear at the age of four. The sphenoid is usually developed at birth.

An inflamed pharyngeal wall, in the absence of diseased tonsils and adenoids, is very suggestive of paranasal sinus disease. The naso-pharyngoscope gives valuable information in the diagnosis of these cases. Since the treatment of such conditions is with very few exceptions restricted to the ordinary treatment of the associated conditions, it is not a matter of very great importance whether an actual diagnosis of this or that sinus involvement is made. The prognosis in paranasal sinus disease in infants and young children is good. Eighty percent may be cured by removal of tonsils and adenoids. In a few cases a change of climate is necessary for complete recovery.

In conclusion I would like to plead for a

greater cooperation on the part of those who see the cases early, and the specialist in Eye, Ear, Nose and Throat diseases. We are all primarily working for the betterment of humanity, and it is much easier to do what is necessary early than it is after it is too late. I have a wholesome respect and admiration for those wonderful fellows who must take the initiative and the responsibility when as the "family physician" they are first called to see those cases. They are entitled to a wonderful amount of credit, but at the same time it does not detract from their glory or prestige if they will call consultation early. The specialists advice is worth more if given in time, than if given when there is little or nothing that can be done.

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### THE INTRA-PERITONEAL USE OF DIPHTHERIA ANTITOXIN\*

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Diphtheria antitoxin was first placed on the market in 1894, and since that time the dosage and method of administration has been a source of considerable discussion. It is my purpose in presenting this paper to show the advantages of the intra-peritoneal route over other methods, as to simplicity of technique and reactions.

The super concentrated serum produced now through the removing of all inert proteins, have reduced the anaphylactic reactions to practically nil, and there need be no fear in giving the antitoxin to all children suffering from diphtheria, except the known asthmatic and they may be easily desensitized.

The adding of adrenalin one minimum of 1:1000 solution for each year of age, will also prevent serious reaction.

I want to add here that from my observation and treatment of many cases, and from the teaching of Dr. Woody at the Municipal Hospital in Philadelphia, I believe in large doses of antitoxin. Twenty thousand units being the minimum administered intra-muscularly to the mildest cases.

**METHODS.** The intra-muscular and subcutaneous methods are too well known to warrant discussion. Both methods cause considerable reaction such as heat, redness and pain, which is very annoying to the child. These reactions usually last two or three days.

Intravenous method is the ideal way, as you place the antitoxin directly into the blood stream and there is no local reaction, provided none of the serum escapes into the surrounding tissues, but unfortunately at the ages of one to three, when children are most susceptible to diphtheria, it is very difficult even for the expert always to pick up a vein.

Intra-peritoneal injection is a simple and safe procedure, and since first described by Blackfan in 1918, has been used frequently for the introduction of normal saline, and recently whole blood has been given with rapid absorption and no ill effect.

Platou was the first to give the antitoxin intraperitoneally. He diluted the serum with eight to ten cc. normal saline and gave it by gravity. Dr. Platou first administered it to rabbits and found the serum produced no inflammatory reaction to the peritoneum. He then made a comparative study in twenty-one patients, giving the serum intramuscularly in nine cases, while twelve were treated intraperitoneally, two were moribund at the time of the administration of the antitoxin, one dying thirty-five, and the other in twelve hours after receiving the antitoxin.

At autopsy no free fluid or other evidence of inflammatory or local reaction was found. By laboratory test, he (Platou) has shown that absorption of the antitoxin injected intraperitoneally is five times greater than following an intramuscular injection. The absorption being so rapid from the peritoneal cavity that in one hour enough antitoxin will be absorbed to neutralize any uncomplicated case of diphtheria. The younger the patient the more rapid the absorption. The peak of units of antitoxin found in the blood according to him, is reached in thirty-six hours, when given intraperitoneally, and seventy-two hours intramuscularly.

My technique for giving diphtheria antitoxin intraperitoneally is as follows:

First I do a skin sensitization test, then make sure the bladder is empty. The child is placed in the recumbent posture, and an assistant restrains him. The most favorable site for the injection is through the linea alba and just below the umbilicus. The skin is prepared in the usual surgical way by being painted with iodine and washed with alcohol. The ordinary stock syringe of twenty thousand units of concentrated or super con-

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centrated serum is warmed to about body temperature.

The skin and subcutaneous tissues are picked up between the thumb and index finger of the left hand, keeping the beveled side of the needle posteriorly and pointing upward, it is plunged obliquely through the abdominal wall into the peritoneal cavity. The serum is then slowly injected, the needle withdrawn and the puncture sealed with collodion.

Report following cases I have treated since January 1-24.

CASE 1, JAN. 15: P. T. Age three years, had high fever and sore throat three days. Child looks toxic, anterior cervical glands very much swollen. Sero sanguinous discharge from nostrils, breath very foul. T. 104, P. 156. Both tonsils, pillars and uvula covered with thick grayish membrane. 20,000 units diphtheria antitoxin given intraperitoneally.

Jan. 16: Twelve hours after injection T. 100, P. 120, swelling of glands subsiding, membrane breaking loose, nasal discharge much less, child looks less toxic. Report culture positive, bowels moved and child ate good breakfast and feels fine.

Jan. 17: T. 98, P. 100, glands subsided, throat clean, recovered.

CASE 2: E. T. Sister of case 1. Age five years. Complained of sore throat and fever for two days. Child toxic enlarged anterior cervical glands. Tonsils covered with membrane T. 101, P. 136. 20,000 units antitoxin intra-peritoneally.

Jan. 16-24. T. and P. normal. Tonsils almost free from membrane. Recovered.

CASE 3, FEB. 7: M. S. Age four years. Sick with cold and difficult breathing for three days. Patient very toxic and has ashy color, skin moist and clammy, face anxious expression, rapid respiration with marked pulling. T. 99.6, P. 140, large anterior cervical glands. Tonsils covered with thin grayish glistening membrane. 20,000 units antitoxin intraperitoneally. Twelve hours later child slightly improved, but I gave 20,000 intramuscularly.

Feb. 8: General condition much better, complaining of pain in right thigh: site of my intramuscular injection. Recovered.

CASE 4, FEB. 15: B. L. Age four years, has had sore throat and swollen anterior cervical glands five days. Tonsils covered with membrane. T. 101, P. 135. 20,000 units intraperitoneally.

Feb. 16: Condition improved. Recovery.

#### Summary and Conclusions:

#### 1. The technique of intraperitoneal injection

of antitoxin is a simple and safe procedure.

2. General reactions may occur, but are greater in the intravenous than other methods.

3. Local discomfort is absent in the intraperitoneal method.

4. It is adapted to infants and young children where veins are inaccessible.

I wish to thank Dr. V. K. Allen for referring me patients 1 and 2, and Dr. J. C. Peden who assisted me in the first cases treated.

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### THE OPERATIVE TREATMENT OF INFANTILE PARALYSIS\*

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Acute anterior poliomyelitis, or infantile paralysis, is an acute infectious disease occurring endemically and sometimes epidemically. As patients affected with this disease are usually seen first by men in general practice, it is with the resulting disability and deformity that the orthopedic surgeon most concerns himself.

It is not to be inferred from the title of this article that the treatment of this condition is entirely of an operative nature. One must not overlook the value of such measures as rest, massage, muscle training, and supportive apparatus or braces. All of these are valuable agencies when properly used.

It is our purpose in this article to outline the operative treatment as well as may be, in the short space of time allotted. With this in mind, let us consider briefly the causes of deformity and the types of deformity most frequently met with.

The causes of deformity are gravity, habitual posture, functional use, and contracture or shortening of the active muscles antagonistic in action to the paralyzed ones.

The paralysis is usually confined to one or both of the lower extremities, but the abdomen, back, and upper extremities are by no means immune to its baneful effects. So that deformity or disability is most often seen in the lower extremities. Among the most common deformities found, then, are flexion contracture of the hip and knee, equinus and calcaneus deformities of the foot, or either of the latter associated with lateral distor-

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tion of the foot—that is, the varus and valgus deformities. Rotary lateral curvature of the spine and flail shoulder are fairly common sequences of the disease. Paralysis or marked weakness of the gluteus medius muscle is fairly often seen, and is the source of a troublesome limp.

Operative work may be classified, in general, into shortening of over-stretched weakened muscles, stretching or open lengthening of tendons in a state of contracture, tendon transplantation, and the so-called “stabilizing” operations. This latter term has been somewhat over-used in some quarters. Such operations are quite often necessary, but one should exercise care lest he become over-enthusiastic in the destruction of joints for this purpose. It is better, generally speaking, to do a more conservative operation and reserve these radical procedures to be used as a last resort in case of insufficient success with the more conservative measures. It may be laid down as a maxim that deformity must always be corrected before any tendon work is attempted.

A weakened muscle whose tendon is stretched out cannot possibly act efficiently, hence it is necessary in such cases to shorten the tendon by operative means and in this way one often observes decided increases in muscular power, even a good many years after the original attack.

Flexion deformity at the knee may be corrected by putting up the affected part in plaster of Paris, cutting the plaster at the level of the joint, and gradually insinuating from behind a wedge of cork, forcing the edges of the plaster farther apart each day, thus slowly correcting the deformity. Stretching under anesthesia may be used, or open lengthening of the hamstring tendons may be done.

For marked weakness or paralysis of the quadriceps extensor muscle, transplantation of one or more of the hamstring tendons into the patella has been done with considerable success. The biceps femoris is usually taken for this purpose. Some of the men who attempt to formulate rules for tendon work, have stated that a flexor muscle will never take the place of an extensor, but if this rule may be correctly applied to other parts of the body, we find here an exception. Naturally, the biceps will not entirely fulfill the function of the quadriceps but it serves to decrease to a marked degree the extent of disability incident to quadriceps paralysis.

One of the most frequent deformities observed about the foot is valgus, with or with-

out equinus. For this condition several operations have been devised. Here there is marked weakness or paralysis of the tibialis anticus or of this associated with a similar condition of the tibialis posticus. If it is a case of weakness, and not one of paralysis of these muscles, the reinforcement operation may be done by transplanting the extensor communis digitorum into the anterior tibial after shortening the tendon of this latter. Another operation known as the “loop operation” has been devised for this condition but it is rather complicated in its technique and should be done only in those cases where the tibial muscle is completely paralyzed. Bringing over the peroneus longus to the inner border of the foot has also been done and may be found useful where the tendons usually transplanted in the foregoing operations are not strong.

For varus deformity of the foot, one or both of the tibials may be transplanted to the outer border of the foot. Astragalectomy has also been done for this condition.

Let it be understood that no definite rules may be formulated for tendon transplantation. One must take into consideration all the factors in the case in order to determine what should be done in each individual case.

We shall now take up those procedures whose primary object is to promote stability, falling mostly under the class of arthrodeses or joint-stiffening operations. Another one, which has become a classical procedure is the astragalectomy. The time allotted will not permit a detailed description of all of these but, in general, they consist of the removal of the cartilaginous surfaces of the joints and fixation for a time in plaster of Paris in order to promote ankylosis. Bone pegs and bone grafts may be used as adjuncts.

Arthrodesis may be done at the shoulder for deltoid paralysis and at the knee for complete or nearly complete loss of power of flexion and extension. At the foot, the sub-astragaloid arthrodesis will suffice in some conditions, but some orthopedic surgeons stiffen also the medio-tarsal joint as well as the ankle joint “per se.”

Astragalectomy is one of the best procedures at our command, but it is also perhaps the most abused operation in existence, certainly in the domain of orthopedic surgery. In order to get adequate results, the exact technique must be thoroughly understood and its indications must ever be kept in mind. The chief indications are calcaneus and danglefoot.

Finally, we come to that most distressing deformity, severe rotary lateral curvature of the spine. Here the deformity should be corrected, as far as possible, by the use of the corrective plaster-of-Paris jackets supplemented, if need be, with the use of traction in the recumbent attitude. Then the operation of spinal fusion should be done to maintain the correction and arrest further development of the deformity. This same line of procedure may well be applied to that other variety of progressive scoliosis of severe form, said to be of "idiopathic" origin.

It is desired to emphasize a few important facts. I have yet to see a cripple from this disease whose condition could not be materially improved. There are extremely few of them who cannot be taught to walk about with the assistance of braces and crutches. There are patients with practically no power in the lower extremities but with good arm power, who move around at will by their own efforts. There are those who get about by means of the so-called "tripod method" of walking who have only one good arm and the other one good enough to allow them to hold a crutch.

To sum up, then, there are a large number of cripples for whom nothing has been done and commonly regarded as hopeless, for whom much can be done to improve their outlook on life. No set rules can be made but the individual case must be managed according to its own merits. Conservatism should, in general, be the rule for handling these patients, but there are cases where only radical measures will produce the results sought after.

*Discussion:* EARL D. MCBRIDE, OKLAHOMA CITY.

Mr. Chairman and fellow members of the Society: The operative procedure in infantile paralysis is one that should receive the closest possible attention and muscles should never be transplanted or bone removed until it is definitely determined what the ultimate result will be from the mechanical standpoint. The operative procedure should not be undertaken under two years from the time of the acute illness, because there is a certain amount of regeneration which will take place up to this time if deformity is prevented.

The most successful operation of a corrective nature is that of Astragalectomy. It is mechanically perfect when done for the specific deformity known as calcamo-valgus or complete flail foot. . . . When the Whitman technique is used and the foot is placed well backward the result in ankle joint move-

ment is somewhat similar to that of an artificial ankle joint. There is a limited flexion and extension movement but no lateral movement and this gives a stability which is very much to be desired. Personally I like this operation much better than the arthrodesis as it is a simpler procedure and is absolutely accurate. The most successful tendon transplantation is that of the anterior tibial being transplanted to the outer border of the foot for varus deformity. It is a very strong muscle and when indicated is sure to give satisfactory results.

The Loop operation as described by Whitman for valgus is also very successful but is a very tedious operation. When there is a flail knee and flail ankle with very good hip muscles, arthrodesis of the knee joint with astralēctomy gives a satisfactory walking leg which does not require bracing. Transplanting of the biceps into the patella is successful only in well selected cases. I believe that corrective operation should be done in all cases where possible so as to relieve the patient of the burden of braces.

#### UROLOGICAL PROBLEMS IN CHILDREN\*

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Urological problems in children have heretofore received almost no attention, from the standpoint of modern Urology. I believe that there are two rather definite reasons for this. First, the previous lack of urological instruments sufficiently small in size to make exploration of the urinary tract in these little patients practicable. Second, the infrequent opportunities of studying these cases by urologists, due to the fact that pediatricians and general practitioners, who first see these patients are not yet generally familiar with the possibilities of applying in children the diagnostic methods so well known in adult urology. This attitude deserves no criticism. For, with the exception of the contributions of, (1) Kretchmer, (2) Hyman, (3) Stevens and a few others, our literature is barren on this subject, and in consequence it is hardly to be expected, that ideas on so broad a subject, should become crystallized, generally, with this comparatively small amount of evidence. Be that as it may, however, I believe

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that as it becomes more generally recognized that modern methods of urological procedure now are equally as practical in children as in adults, those who primarily see these cases will more often avail themselves of this advantage in diagnosis.

Urinary pathology in children does not differ, in general, from that found in adults, except the small percentage of lesions incident to age, as hypernephroma, prostatic hypertrophy, etc.

It may be contended that children with urological symptoms are a transient problem; that most of these cases recover rather promptly on expectant treatment. There is a considerable basis of fact for this contention. The resistance of youth; the aptitude with which youthful physiology becomes adjusted, in compensation to numerous derangements, undoubtedly accounts for the apparent recovery in these cases. But the underlying cause of the symptomatology is there, and I am firmly convinced, that many of the lesions, with which we have to deal, in the adult, particularly lesions in the upper urinary tract, are but an expression of declining adult physiology and resistance in the presence of a congenital defect, which was the underlying factor in the symptomatology in the child. (4) In a previous article I have pointed out the congenital aspect of ureteral obstruction.

It is a rather generally accepted idea, that metastatic infection has something to do with the well marked ureteral stricture formation, which is now so commonly recognized in adults, with attendant dilatation of the ureter or renal pelvis; often to an enormous degree.

There is also abundant proof that lesions, similar in character, in a wide degree of development, are present in childhood, even in utero. It, therefore, seems logical to presume, that the child who has a transient dysuria, pyuria, or hematuria following some of the infectious diseases, or an exacerbation of nasal, pharyngeal, or intestinal infection, may be afflicted with a congenital obstruction of the ureter, which becomes a lodgement point for metastatic infection, but which does not exhibit persistent symptomatology until further narrowing occurs, perhaps some years later, a result of fibrous tissue formation.

If this position is tenable, it is clear that, by failure to recognize this obstruction in the child, we have missed the opportunity of dealing with a problem, which in early life may have been successfully solved; but which when seen years afterwards in the adult, when extensive damage has occurred, pre-

sents anything but a favorable outlook for repair. I am firmly convinced, that the well known frequency with which pyelitis of pregnancy occurs, could be greatly modified by the recognition and treatment of upper urinary tract pathology in early life.

#### SYMPTOMS AND INDICATION. FOR DIAGNOSTIC INVESTIGATION

Children, especially very young children, are obviously not able to describe their symptoms with accuracy and clearness. The objective symptoms, therefore, are the evidence upon which we must largely depend, as an indication for investigation. Pus in the urine, with or without attendant rise of temperature, is the most frequent and important symptom. Of next importance is urinary disturbance, (enuresis, frequent or painful urination). Hematuria is uncommon, as compared with adults, due to the fact that malignant tumors of the bladder or kidney which contribute to a considerable degree, to the hematuria of adults, are rarely, if ever, seen in children, with the exception of renal sarcoma.

Persistent abdominal pain in children should be kept in mind as a possible symptom of obstruction in the upper urinary tract. The pain period during the development of hydronephrosis, is sometimes passed in early childhood, and not recognized as such, thus accounting for the absence of this symptom in the history of some hydronephroses in adults.

Pus in the urine, as in the adult, is not of itself indicative of any particular lesion. It may be due to cystitis, uretero-pyelitis, stone in the bladder or upper tract, bladder diverticulum; or with the female, if the specimen is voided, the pus may be from a vulvo-vaginal infection. It is just as essential to obtain the specimen by catheter in the child as in the adult. I recall such an instance. A girl eight years of age had been treated for pyelitis upon the evidence of fever with pus and colon bacilli in the voided urine. There had been no improvement. A catheterized specimen was entirely negative, but a smear from the vulva showed pus and colon bacilli, which accounted for the urinary findings. The temperature was due to pulmonary tuberculosis.

I believe, that the above situation answers, in a large degree, the predominating frequency with which infection of the urinary tract occurs in female children. The infection, probably very often, gains access to the bladder or upper tract by direct extension.

Pus and infection in the catheterized specimen is indicative only of involvement

above the urethra, and the source must be demonstrated by the cystoscope and ureter catheter. However, from personal observation, pus in the urine, in the female child, as in the female adult, is, comparatively speaking, more often a bladder involvement. The diagnostic problem of hematuria is a similar one, and cystoscopy is essential.

#### CYSTOSCOPY, URETERAL CATHETERIZATION, AND RADIOGRAPHY

*CYSTOSCOPY*, is the key to equally as many diagnostic problems in children as in adults. It is not as practicable in boys as early as in girls, for obvious anatomical reasons. However, as previously mentioned, the indications for cystoscopy are far more frequently encountered in the female patients, due to the more frequent occurrence of bladder infection, probably a result of anatomical difference; the frequent menace of vulvo-urethral infection from constant rectal contamination. Consequently, cystoscopy and ureteral catheterization are more often necessary to differentiate this from pyelitis or other renal infection.

For the same reason (frequent bladder involvement) pyelitis is more frequently encountered in girls. I doubt that congenital irregularities are more frequent in the upper urinary tract in girls, but it is obvious, that a urinary stasis in the upper tract is more frequently subjected to the presence of infection, of which the colon bacillus is the most common type, due to the above mentioned bladder involvement.

Cystoscopy, in girls, is practical from infancy, and anesthesia is seldom necessary. In boys, as previously mentioned, cystoscopy is not generally practicable as early as in girls, as the urethra does not admit instruments of sufficient size, to be of practical use, without considerable trauma and my attitude toward cystoscopy in boys is that of conservatism under two to three years of age, unless the need for the procedure is most urgent; particularly with the use of cystoscopes of sufficient size for ureteral catheterization, although, the small observation scopes can be used earlier, for the diagnosis of bladder stones, diverticula, congenital valves of the posterior urethra, etc., which are often the cause of frequency and pyuria; and which occasionally are the factor in persistent enuresis. I have been able on one occasion to pass a small observation scope in a boy two weeks of age without apparent ill effect.

There is another bladder problem which, although rare in children, is of the greatest importance when it does occur, and that is the parietic bladder of spinal cord involve-

ment. Congenital syphilis is, of course, the underlying problem. This lesion should always be kept in mind, and careful inspection made of the bladder musculature for evidence of the lesion, especially if there is retention of urine, (residual urine).

*URETERAL CATHETERIZATION*: The ureter catheter at once differentiates between bladder and kidney involvement. Case No. 1 is illustrative of the value of this diagnostic procedure. Catheterization of the ureters is practical and not particularly difficult. The ureter in the child is, in comparison, considerably larger than in the adult. Even in the infant of a few months, the ordinary No. 5 F. catheter can usually be passed without difficulty.

The utmost gentleness must be used in carrying out the entire cystoscopic procedure. Especially if it is to be attempted without anesthesia. It must further be remembered that in those cases, in which ureteral catheterization is indicated, obstructions of the ureter are not uncommon, and ureteral catheters have occasionally been pushed through the walls of the ureter in adults. Again, the length of the ureter is variable according to the age and size of the child, and the renal pelvis should be approached with caution.

Catheterization of the ureter, in addition to providing urine for differential diagnosis, is also of other diagnostic value. It often discloses the presence of obstruction. The rapid escape of urine, in a continuous flow, is diagnostic of hydro-ureter or hydro-nephrosis.

The ureter catheter is indispensable in the determination of the relative function or working capacity of the kidneys. Here again, are problems similar to those encountered in adults, in which the relative function is the key to the situation, as illustrated by Case No. 2. In this instance catheterization of the ureter from which pus could be seen to escape was never successful, due to contraction of this ureter, drawing the orifice from view, and the status of that kidney could only be ascertained by functional tests, made with the catheter in the opposite ureter, checking this against the amount of dye which appeared in the bladder from the diseased side.

*RADIOGRAPHY*: Urinary calculi are not uncommon in children, and the X-Ray should be made use of as readily as in adults.

*PYELOGRAPHY*: Although the radiograph is the key to the diagnosis of urinary calculi, it is probably of greater importance in pyelography. For the reason that through pyelography, we are able to study the malformations of the upper urinary tract, and

group around them the symptomatic and pathologic ensemble, with the purpose to determine, as nearly as possible, to what extent these malformations are responsible for the development of the pathologic problem.

The same situation obtains, as in the adult, with persistent pyelitis, namely; a more or less degree of obstruction at the renal pelvic outlet with attendant urinary stasis. In consequence, when these conditions are noted in very young children, it seems fair to presume that we are dealing with an infected congenital hydro-nephrosis. I wish to be understood in this connection, as classifying all degrees of obstruction at the pelvic outlet, with attendant pelvic stasis, as a hydronephrosis. The problem of stasis is not necessarily confined to hydronephroses of large pelvic capacity. Finally, I repeat, that in those cases of pyelitis in children which show stubborn resistance to ordinary medical treatment, it can usually be shown by pyelography, that obstruction with attendant dilatation is present, as illustrated by case No. 3.

We know that when a considerable degree of renal damage with anatomical change has occurred, as a result of obstruction, in the adult, that the tendency is toward progressive and complete destruction on that side. From the limited length of time in which I have been able to observe the results of dilatation in these cases in children, I am not able to say, whether or not the same tendency exists, although there is reason to believe, that it does, as evidenced by the progressive decline in the function of the left kidney in Case No. 2. It is, therefore, the part of logic to presume, that if obstructions, which are known to be productive of progressive damage, can be discovered and dealt with in early life, we shall have a more favorable outlook, especially when we remember, that we are dealing with the flexible and more readily adjustable physiology of youth.

**TECHNIC OF PYELOGRAPHY:** I do not wish to be understood as advocating the routine of indiscriminate use of pyelography. I believe, that conservatism in using pyelography is commendable in adults, and more so in children. In children the utmost care must be used in filling the renal pelvis, especially in very young children or under anesthesia. Older children are often able to warn us with the advent of the distention pain, that the capacity has been reached. The filling should always be done by gravity, and the capacity of the renal pelvis and ureter determined first, by filling with sterile water.

#### TREATMENT

The treatment of the various urinary lesions in children varies little from the treatment of adults.

**CYSTITIS:** When the problem is that of cystitis only, appropriate bladder lavage is usually all that is required. There are a certain number of cases, however, in which stricture of the urethra, in females, is a factor, and this must be dealt with.

**PYELITIS:** In those cases which resist medical treatment, it can usually be shown, as previously mentioned, that some degree of malformation, or obstruction above the bladder is present. While lavage of the renal pelvis is commendable, we must keep in mind primarily the factor of obstruction and establish free ureter drainage by judicious dilatation of the ureter. Further, we must not forget that the ureter is often involved in infective processes and medication through the ureteral catheter should be introduced into the renal pelvis with the ureter catheter inserted only a short distance within the lower ureter thus bringing the solution in contact with the ureter as well as the renal pelvis with the object of including the ureter in whatever benefit we may expect from the procedure.

I especially wish to call attention to the necessity of clearing up bladder infection in these female children if we hope to get permanent relief from pyelitis. I am of the opinion, from personal observation, that the bladder infection precedes the kidney involvement, at least in a large percentage of the cases, and accordingly the bladder infection is probably the direct factor in the development of the renal infection.

**BLADDER STONES:** Litholapaxy is practical in female children. In boys, however, a cystotomy is usually the method of choice.

**KIDNEY STONES:** There is a considerable question as to whether all renal calculi should be immediately removed. Calculi in the pelvis probably should be immediately removed as a pyelotomy, if carefully done, is relatively a harmless procedure as compared with the removal of a stone, situated deep in the kidney structure.

In the latter instance, I believe a conservative policy is to be recommended, particularly if it is shown that there is no evidence of blood or infection in the urine. In Case No. 1, in which the child has been under observation for about one year, the urine has been clear, and as nearly as I am able to determine, no damage has resulted from the presence of the stone. The pain was relieved after the first ureteral catheterization, and I

am inclined to think, that this symptom was due to obstruction at the pelvic outlet, rather than to the presence of the stone.

**BLADDER MALFORMATION**, diverticula, etc., are a surgical problem and should be treated by appropriate operative measures.

**PERINEPHRITIC ABSCESS**: This condition occurs occasionally in children. It is entirely a surgical problem. It is probably associated with renal mal-development. In cutting down on these kidneys in adults, one is impressed with the usual lobulated, fetal type of kidney. More often than not, the urinary findings are negative, due to the cortical origin of the affair.

#### CASE HISTORIES

The case histories are submitted as illustrative of several typical problems, rather than of interest as concerns the particular case.

**CASE 1.** Female, age ten, first examination six months ago. She complained of frequency and dysuria which began about three months previously, she also complained of pain in the region of the left kidney, which had persisted intermittently since about two years of age, at which time she passed two small urinary calculi.

#### EXAMINATION

General examination negative, except child was very small for her age and rather anemic.

**URINE.** Catheterized specimen, considerable pus, rod-shaped and coccoid bacteria. Negative for tuberculosis.

**CYSTOSCOPY.** Bladder appeared normal, except a general redness over the trigone and lower part.

**URETERAL CATHETERIZATION.** No. 5 F. catheters passed to both kidneys without difficulty, except slight tightness in the upper left ureter. The urine from both sides was normal.

**RADIOGRAPHY.** Showed a shadow in the region of the lower pole of the left kidney.

**DIAGNOSIS.** Cystitis infective, stone lower pole of left kidney.

#### TREATMENT

The cystitis cleared promptly with bladder lavage. The stone was not removed from the kidney, as there was no evidence of renal infection.

#### RE-EXAMINATION SIX MONTHS LATER

**PAIN.** In the left kidney region, had been entirely relieved since the first ureteral catheterization.

**URINE.** Catheterized specimen, contained a small amount of pus, and a few rod-shaped bacteria.

#### URETERAL CATHETERIZATION

The urine from each side was normal. There was no evidence that damage had occurred in the left kidney, and no operative interference was thought advisable. Patient was advised to return for examination at the end of six months or sooner according to symptoms.

#### COMMENT

With pus and infection in the urine, with a suspicious shadow in the left kidney region, it was first thought that a renal infection with stone was the problem. Cystoscopy and ureteral catheterization demonstrated, that the pus and bacteria in the urine was entirely a bladder problem, and that apparently the kidney had not been damaged by the presence of the stone.

The relief of pain in the kidney region following the passage of the ureteral catheter would indicate, that the pain was probably due to obstruction at the pelvic outlet of the kidney rather than to the stone.

The recurrence, in a mild way, of the bladder infection demonstrates that observation of these cases of bladder infection is essential. Particularly with a menacing lesion in the kidney it should be seen that the bladder infection is eliminated.

The policy of non-interference with the stone, I believe, is best in a child of this age, as long as no apparent damage is occurring. To extract this stone from the lower pole of this kidney in a child of this size, would subject this kidney to considerable trauma and perhaps permanent damage. This case is illustrative of the practical use of the ureter catheter.

**CASE 2.** Female age ten, first examination nine months ago. She complained of pain in the left loin, which began about five years ago, following an attack of measles, and had persisted almost constantly since. There had been frequency and enuresis since birth. There was also a history of chills and fever at various periods during the past three years.

#### EXAMINATION

The child appeared poorly nourished and anemic. The temperature was 99. There was tenderness over the left kidney.

**URINE.** Catheterized specimen contained much pus and colon bacilli. Negative for tuberculosis.

**CYSTOSCOPY.** The geography of the bladder was considerably distorted. The orifice of the right ureter was situated directly back of the urethral opening. The orifice of the left ureter could not be discovered as that end of the trigone was drawn upward

and outward. This had the appearance of a diverticulum, but a cystogram disproved this. Cloudy urine could be seen escaping from the region of the ureteral orifice. The bladder otherwise appeared normal, excepting a general redness over the trigone.

**URETERAL CATHETERIZATION.** No difficulty was experienced in passing a No. 6 F. catheter to the right kidney. The urine was normal. Efforts to catheterize the left ureter were unsuccessful on repeated examinations, due to the distorted position of the orifice.

**PYELOGRAPHY.** The right kidney pelvis and ureter appeared normal.

**COMPARATIVE RENAL FUNCTION.** Urine collected from the right kidney showed a two to one ratio as compared with the urine obtained from the bladder from the left kidney, with one hour intravenous phthaleine.

#### OBSERVATION AND COMMENT

In this case, it appeared that we were dealing with an infective process, of considerable standing, involving the left ureter and kidney. The distortion of the left side of the bladder was probably due to a congenital defect aggravated by infection with attendant fibrous tissue formation and contraction of the ureter.

The functional test was the key to the relative working condition of the kidneys, in which it was shown that the left had probably been badly damaged. It was decided to postpone operative procedure, and keep the child under observation with treatment directed toward clearing the bladder infection.

#### RE-EXAMINATION THREE MONTHS LATER

Child much improved in general appearance. Temperature normal. Still complained of pain in the left loin, but less severe. Bladder urine still contained pus and colon bacilli.

#### RE-EXAMINATION ONE YEAR LATER

General health much improved. Bladder urine still contained pus and colon bacilli. Still complained of pain in left loin, although mild in character.

**CYSTOSCOPY.** Efforts to catheterize the left ureter again unsuccessful. Urine from right normal.

**COMPARATIVE RENAL FUNCTION.** Showed the ratio to be four to one in favor of the right kidney.

It is plain to be seen, that the left kidney is undergoing progressive destruction with compensatory function, developing in the opposite side. Accordingly a nephrectomy is in order to remove the menace of the infected left kidney, which undoubtedly contributes to

the persistent bladder infection. This case is illustrative of the practical use of renal functional tests for purposes of observing the progress of a destructive kidney lesion.

**CASE 3.** Female age eleven. First examination fourteen months ago. She complained of frequent urination with pain in the region of both kidneys. These symptoms began three years previously and had persisted almost constantly, with periodical exacerbations of severity associated with chills and high temperature.

#### EXAMINATION

General examination negative, except very tender over both kidneys. Temperature range from 99 to 101.

**URINE.** Catheterized specimen, much pus and colon bacilli. Negative for tuberculosis.

**CYSTOSCOPY AND URETERAL CATHETERIZATION.** The appearance of the bladder was that of a generalized cystitis. No stones nor diverticula could be seen. The ureters were both catheterized without difficulty. The urine from both, contained abundant pus and bacilli.

**PYELOGRAPHY AND URETEROGRAPHY.** Both ureters were greatly dilated. The right kidney pelvic was considerably dilated. Capacity 15 cc. The left pelvis about normal.

#### OBSERVATION AND COMMENT

The child had failed to respond to the medical treatment usually prescribed in such instances, and the uretero-pyelograms readily disclosed a logical reason. The dilated condition of the ureters and the right pelvis indicated that urinary retention above the bladder had been a factor; probably the underlying factor in the development of the infection.

The ureters and kidney pelves were washed about every ten days with 2 per cent silver nitrate. Mercurochrome, 1 per cent, was instilled into the bladder every second day.

The urine from the kidneys became clear of bacteria after the third washing, a small amount of pus persisted.

#### RE-EXAMINATION TWO MONTHS LATER

Bladder urine, small amount of pus and colon bacilli, urine from both kidneys normal, except a very few pus cells. The bladder infection had persisted, although the upper urinary tract had practically cleared. The bladder treatment was continued.

#### RE-EXAMINATION FOUR MONTHS LATER

Condition unchanged, except the bladder urine was normal, excepting a few pus cells. Her temperature had remained normal. The pain and tenderness in the region of the kidneys had entirely subsided.

## RE-EXAMINATION ONE YEAR LATER

The bladder urine contained a small amount of pus and colon bacilli. Urine from both kidneys was normal except a very few pus cells. The kidney pelvis on the right had a capacity of 15 cc., the same as at first examination. There was a slight recurrence of the bladder infection, indicating that this was probably primary, and emphasizing the necessity of observing this feature of the case, as contamination and infection are very apt to occur as did the original involvement, thus maintaining a persistent menace to the upper tract with its congenital stasis.

## PROGNOSIS

The prognosis is fair if good ureteral function is maintained, and all possible foci of infection eliminated, thus keeping the urine as free as possible of metastatic infection. The fact that the capacity of the right pelvis has not increased during the past year is encouraging evidence, that damage to this kidney has not occurred sufficient to cause progressive destruction. This is the type of case, which will surely have trouble, should pregnancy occur. This case illustrates the practical application of uretero-pyelography.

## CONCLUSIONS

1. The comparatively recent application of well known methods of diagnosis and treatment in urology in children, has disclosed that the problems to be dealt with do not differ materially from those of adults.

2. It, therefore, follows that a very important field of urology has been generally neglected. Heretofore, efforts to explore the urinary tract of children have been handicapped, by the lack of instruments of sufficiently small size. However, these instruments are now practical and obtainable. The possibilities of exploration, including cystoscopy, ureteral catheterization and pyelography are, therefore, entirely practicable.

3. Diagnosis and treatment of urinary lesions in children is as important, if not more so, than in adults, as it is altogether probable that congenital malformation is often a factor which is the underlying cause of the development of many destructive lesions in the adult, and if these can be discovered, and corrected in childhood, opportunity of successfully solving some of the problems of obstruction may be greatly improved.

1334 Rialto Bldg.

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## SOME OF THE CAUSES OF BACKWARD STATE OR RURAL OBSTETRICS\*

C. D. BLACHLY, M.D.  
OKLAHOMA CITY

One who has practiced general medicine and obstetrics in a rural community in Oklahoma for fifteen years or more cannot help but feel the gulf separating proper obstetrics and obstetrics as usually practiced. You will recall the story of when Woodrow Wilson ascended into heaven Moses asked him if the people had yet adopted his fourteen points.

"I should say not," answered Woodrow, "They have not even yet adopted your ten commandments." So possibly we should not be totally discouraged about our apparent failure to get a science which is scarcely over fifty years of age universally introduced. While there is not a man here who has not thought of and discussed this question time and again it is one of the problems which is of such vital importance that a word is always in order on the subject.

We spoke of the great gulf between proper obstetrics and obstetrics as usually practiced. Why does this difference exist? The life saving power of good obstetrics has long been known. My personal experience has led me to feel that first of all there is a lack of appreciation on the part of the public as to the extreme importance of conducting a confinement in the proper way, and secondly, there is a lack of feeling of full responsibility on the part of the physician. It is one thing for a man to be careful in doing a Laparotomy before an assembly of trained medical men and another for the same man to attend an obstetrical case in some dimly lighted rural home with only a few rustic women about. The former service is given in an atmosphere which bespeaks asepsis, competent assistance and intelligent criticism, all demanding the best skill there is in one—the latter the opposite. However, in the latter services, his responsibilities are as great if not greater.

Then there is that other thing—the cost—against him. To provide the necessary equipment to conduct each case properly, involves an outlay of four or five dollars. In a City practice there is no particular reason for one family's knowing what another is charged but in the country let Dr. "A" charge \$30.00 for an obstetrical case and Doctor "B" charge \$25.00 for what the community considers the same service and see what happens to Dr. "A". Either he has to bear the extra

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

expense of furnishing his sterile supplies himself or at the end of a year or two, see Doctor "B's" car standing in front of homes of many of his good families.

We personally have been using sterile equipment in our rural work for some years and we can say from actual experience that the educating of the general public to an understanding of scientific obstetrical care is a slow but not impossible task. The more intelligent the people served, the more easily convinced are they of its value.

Custom has more to do with the actions of people than any one factor. When one goes into a country home to conduct a delivery it is usual to find under the sheet a large piece of oilcloth placed there to protect the mattress. Also one finds good soap, olive oil and talcum powder. These are purchased for the particular occasion even by people in comparative poverty. This goes to show that the parents are willing to provide needed articles when they feel they are a necessity. I have for exhibition here today a sterile package recommended by the Bureau of Maternity and Child Hygiene at Washington. It contains the following articles.

Bed Protectors.....	2
Delivery Pad.....	1
Sanitary Pads:	
Large Size.....	6
Small Size.....	12
Gauze Sponges.....	12
Cord Dressing:	
With Cord Tie.....	1
Without Cord Tie.....	1
Bobbin Tape—Length 10 inches.....	2
Cotton Pledgets.....	6
Baby Band.....	1
Towels.....	4
Sanitary Belt.....	2
Leggings .....	One Pair

Similar packages should be available in all communities and the people should be expected to furnish them in all confinement cases. This is equipment that is as necessary as are dressings for surgical cases. These latter may may be purchased at any drug store. Of course many of the articles in this package can be used again and again so that practically it is more economical for the patient to buy the package with the understanding that a refund is to be made on returned articles. The thing that first must be done is to teach the people the value of them. This can be accomplished thru the medical profession, thru the public health nurses, thru the nurses of local hospitals and thru the agencies of the Bureau of Maternity and Child Hygiene.

A similar package to the above, made from

such old cloth as is usually to be found in any home, is being used. When properly prepared and sterilized it answers very well. The preparation of such bundles is fostered by our State Bureau of Maternity and Child Hygiene, and will be made available for purchase by the patients, if so requested.

### Abstracts, Observations from Current Medical Literature

#### CAN'T TRANSPLANT HUMAN EYE

To transplant a human eye and to expect it to function properly for its new owner is not even a remote possibility at the present time, says *Hygeia*, popular health magazine published by the American Medical Association, in its October issue.

This statement is made to destroy any false hopes held out by blind persons following recent newspaper accounts of experiments in transplanting an eye made by Dr. Theodore Kopanyi, University of Chicago biologist. Dr. Kopanyi has been conducting researches in eye transplantation on animals.

"While this research is of interest to the biologist," states *Hygeia*, "there is not the slightest warrant for believing that the transplantation of a human eye is at present even a remote possibility so far as concerns the securing of a successfully functioning organ."

#### MEN, TOO, HAVE HYSTERICS

Men are now known to be hysterical in quite as many instances as women, says Dr. George K. Pratt, Boston psychiatrist, in an article on "Just Nerves" in the October issue of *Hygeia*, popular health magazine published by the American Medical Association.

The conventional conception of hysteria is of a woman alternating between wild laughter and tears and pulling her hair. Such a picture says Dr. Pratt, is only a fragmentary one.

"The World War with its innumerable cases of shell shock—a term which means exactly nothing at all—among soldiers of all nations proved that men have hysterical manifestations nearly as frequently as women," Dr. Pratt declares. "Furthermore, hysterical outbursts have equivalents in many other grotesque actions, such as hysterical blindness, hysterical paralysis of arms or legs, hysterical fits resembling epilepsy and so-called attacks of amnesia where memory is lost.

"Hysteria may, and often does, simulate almost any genuine disease to which human flesh is heir. Examination invariably discloses however, that the organs complained of are not physically damaged.

## Itinerary of Dr. Morris Fishbein in Oklahoma



As noted elsewhere in this issue Dr. Morris Fishbein, Chicago, for many years one of the directing minds of organized, scientific medicine in America will make a hurried visit to Oklahoma in October. Naturally it is impossible for Dr. Fishbein to visit many important points in the State, but it is hoped his hurried visit to our State and the message he will so ably present will fall upon fertile soil and be productive of the results it's worth deserves. No man probably is so much entitled to a hearing. He is alive to all the major problems of the day, whether they are lay, civic, scientific or medical. Failure to hear him will record a distinct loss to those who should avail themselves of this opportunity.

If unforeseen events do not prevent his plan is outlined below:

October 21, *McAlester, Okla.*, Address, noon, Scottish Rite Masons: "The Progress of Medical Science."

Synopsis: A brief statement of the development of modern medicine and the manner in which the physician performs his work.

October 21, *Durant, Okla.*, Address, afternoon, Bryan County Medical Society. "The Work of the American Medical Association."

Synopsis: This address, with stereopticon slides tells about the work at the headquarters office of the American Medical Association.

October 21, *Ardmore, Okla.*, Address, evening, Carter County Medical Society and Public: "The Progress of Medical Science."

October 22, *Oklahoma City, Okla.*, Banquet Dinner, Oklahoma City Medical Association. "The Mirrors of Medicine."

Synopsis: A discussion of the specialties in medicine and foibles of the specialists.

October 22, *Oklahoma City, Okla.*, Address, Oklahoma County Medical Association and Public, evening: "The Progress of Medical Science."

October 23, *Chickasha, Okla.*, Address, Grady County Medical Society, noon luncheon, Rotary Club: "Medicine and the Press."

Synopsis: A statement of the relationships between physicians and the newspaper and magazine in health education.

October 23, *Enid, Okla.*, Address, evening, Garfield County Medical Society and Public: "The Progress of Medical Science."

October 24, *Tulsa Okla.*, Banquet Dinner, Tulsa County Medical Society: "The Mirrors of Medicine."

October 24, *Tulsa, Okla.*, Address, Tulsa County Medical Society and Public, evening. "The Progress of Medical Science."

# THE JOURNAL

OF THE

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### EDITORIAL

#### A MESSAGE FROM YOUR PRESIDENT

The exhilarating fall days have arrived bringing with them one of the most abundant agricultural harvests our State has ever before experienced.

Almost every industrial organization is now busily engaged in planning, or has already put into action educational campaigns, has made ready for an expansion of business, or is now ready to give better service to its patronage.

Should physicians be any less active in their endeavors to better qualify themselves for service to their patronage or give more

cautious attention to the business side of their profession?

For the past two or three years our American Medical Association has attempted to more diligently prosecute educational campaigns among the laity. Especially have they been trying to teach, through well edited articles upon some medical topic, published in popular magazines or large daily newspapers, the public to differentiate between the qualified physician and the quack or cultist. Does it not behoove our own profession of this progressive State to also fall into line with several other State Associations which have already met with such flattering success in this campaign? Have we not most keenly experienced the truthfulness of the statement of one of our Past Presidents of our A. M. A. when he declared that, "Legislation without previous education, even if obtainable, is unsuccessful?"

Your President and other Officers of the Oklahoma State Medical Association have not been idle since our last annual meeting. We have only a part of our program for this administration ready to announce, though this announcement we believe, shall cause every loyal physician to rejoice. We are indeed fortunate in securing permission of the President and Board of Trustees of the American Medical Association for a full week's service of Dr. Morris Fishbein, recently elected Active Editor of the American Medical Association Journal. An announcement of his route and lectures through our State is found elsewhere in this issue of our JOURNAL. You shall also see announcements of his lectures in three or four of our leading daily newspapers about October 19 and 20th.

Dr. Fishbein needs no introduction to the members of our profession who read the American Medical Association Journal or Hygeia which is published by the American Medical Association for the benefit of the laity. His articles upon Public Health and scientific facts about medicine are also carried by seventy-two leading daily newspapers of the United States including the Sunday edition of the Daily Oklahoman. Dr. Fishbein will not only bring us a clear message of the progress and latest facts in medicine but is said to have the rare ability to successfully sell the regularly qualified physician to a public audience.

Your committee on Public Policy and Instruction of the Public means to draft into service a number of other qualified physicians of our own State membership to immediately take into other districts of the State a similar message to that which is brought by Dr. Fishbein.

Shall we let this rare opportunity of doing service for the public and for ourselves pass

with only a half hearted support? I hear your reply, "No, we shall not."

The public audience and the reception given to Dr. Fishbein at the various places which he shall visit will, I believe, assure him that the medical profession of Oklahoma is second to none other of the forty-eight states in progressiveness and loyalty.

Sincerely yours,  
EVERETT S. LAIN

## THE INFECTIONS OF CHILDHOOD

We feel that we have failed in our duty if we neglect once again to note the menace of infections peculiar to childhood, prevalent at this season, and the outstanding position of responsibility for their control and prevention which rests in the hands of the physician, especially the family physician. We generally understand that the *sine qua non* of this matter rests, first, with intelligent parenthood and application and enforcement of very simple rules of hygienic knowledge in the every day life of the growing child, and the trusted medical advisor of the family. At this time thousands of Oklahoma children are entering upon a new year of school life. They are at once brought into contact with the infected, the neglected, those who are victims of inattention on all sides. At the same time they may be themselves carriers of dangerous infections, regardless of their social standing or position. The greatest responsibility for limiting controllable infections lies in the activity and intelligence of the teacher and medical inspectors of our school. Upon their activity and good faith rests the fate of many, who, in the absence of energy and constant alertness become the eventual victims of far too many of our so-called "preventable" infections. Diphtheria is so easily recognized, its prompt treatment so productive of brilliant results that it has been well said that every death from that disease is an indictment against civilization. Many others of the diseases peculiar to seasonal influence to the sudden bringing together of thousands of children are also easy of recognition, even though they may not be so amenable to treatment. We cannot, probably with our present state of general knowledge, lax and disregarded laws and rules for control of these infections, hope to ever see them entirely prevented—our cults will see to it that every intelligent move in that direction is hampered—but, we should attempt to lower the general morbidity and mortality rate incident to these infections of childhood. They rise too promptly and immediately with the coming of the school year and the "cold"

season. We all know exactly the how and the why of the matter, but we seem utterly unable to reduce to the vanishing minimum the rate as low as our present state of human intelligence demands.

If the matter was one concerning the human adult the present state of apathetic regard, or disregard, might be somewhat excusable, but it concerns, vitally and tragically, the child of today, whose chances for the manhood of tomorrow may be forever blighted in the failure of applying very common rules of hygienic common sense.

### Editorial Notes—Personal and General

DR. W. B. WALLACE, Coalgate, has removed to Maysville.

DR. E. W. HOOPER, Tulsa, has removed to Humboldt, Kans.

DR. P. P. NESBITT, Muskogee, is attending the clinics at Chicago.

DR. J. HUTCHINGS WHITE, Muskogee, is attending the clinics at Chicago.

DR. J. W. CRAIG, Vinita, has returned from a two weeks' vacation trip to the Pacific coast.

DR. LEILA E. ANDREWS, Oklahoma City, returned recently from a three months' trip to Europe.

DR. E. B. DUNLAP, Lawton, and family, have returned from an auto trip to various points in Colorado.

DR. and MRS. THOMAS W. DOWDY, Wilson, have returned from a vacation spent at various Texas points.

DR. O. J. COLWICK, Durant, has returned from Vienna, where he attended the clinics for several months.

DR. C. W. ARRENDALL, Ponca City, has been appointed City Physician succeeding Dr. L. C. Vance, resigned.

DR. P. M. RICHARDSON, Cushing, was suddenly called to Bolivar, Mo., on account of the death of his mother.

DR. I. V. HARDY, Medford, and DR. J. R. SWANK, Enid, are making a trip to Rochester, to attend the Mayo Clinics.

DR. J. C. DOVELL, Paden, has been confined to a hospital at Shawnee, on account of blood poisoning in one of his arms.

DR. D. LONG, Duncan, has recently been appointed county Superintendent of Health by Dr. Carl Puckett, State Commissioner.

DR. and MRS. G. A. KILPATRICK, Henryetta, are the proud parents of a baby boy, weight eight and one-half pounds, born August 31.

DR. and MRS. CHARLES E. BARKER, Oklahoma City, returned recently from an auto trip to New York and Boston and other points in the East.

DR. L. A. MITCHELL, Frederick, is attending a six weeks' course of instruction at Carlisle, Pa., as a member of the Officers Medical Reserve Corps.

DR. J. H. SCOTT, Shawnee, has been appointed Superintendent of the Darlington Home for narcotic addicts, following the resignation of Dr. J. W. Scarborough.

DR. T. J. DODSON, Picher, has removed to Norman, and has opened an office for the practice of physiotherapy in connection with general medicine and surgery.

DR. ARTHUR W. WHITE, Oklahoma City, returned with his family recently, after motoring from Michigan resorts, where they had spent a two months' vacation.

DR. M. M. DeARMAN, Miami, recently performed an operation for appendicitis on his father, Thomas DeArman, 76 years old, at the Baptist hospital. Mr. DeArman left the hospital a well man eight days later.

DR. TOM LOWERY, Oklahoma City, received an injury to one of his eyes recently, when a golf ball struck him, breaking the lens of his glasses. It is believed the injury will not result seriously, although the eye was severely cut.

CARNEY, OKLAHOMA, is without a doctor, according to Mr. G. E. J. Jones, Cashier of the First National Bank there, Dr. W. A. Pendergraft having retired on account of poor health. They offer an opening for a good physician.

GARFIELD COUNTY MEDICAL SOCIETY met September 19th, with a good attendance; the feature of the meeting being a paper on "The Role of Iodine in the Prevention and Treatment of Goiter," by Dr. Paul B. Champlin, Enid.

McINTOSH COUNTY MEDICAL SOCIETY met at Checotah on September 9, with the following program: "Osteo-Myelitis," by Dr. L. I. Jacobs, Vivian; a paper by Dr. G. W. West, Eufaula; "Diarrhoea and Dysentery," a general discussion, a clinic, and report of cases.

McCURTAIN COUNTY MEDICAL SOCIETY met at the office of Dr. A. S. Graydon, Idabell, August 26, and had an interesting meeting. Those present were Drs. E. A. Kelleam, Garvin; Eugene Baylis, Idabell; R. C. Farrier, Idabell; N. L. Barker, Broken Bow; R. H. Sherrill, Broken Bow; J. T. Moreland, Idabell; R. D. Williams, Idabell, and A. S. Graydon, Idabell.

OKLAHOMA COUNTY MEDICAL ASSOCIATION plans a new departure in its programs, Dr. William H. Bailey, President, announced. Clinical evenings or diagnostic clinics at hospitals in the city will be held under auspices of the hospital staffs. In this manner it is hoped to arouse more interest in the meetings and present much valuable material to the profession.

DR. J. M. BYRUM, Shawnee, has removed his offices from the Shawnee Clinic and is now located on the 3rd floor of the Mammoth Bldg., Shawnee, in association with Dr. A. C. McFarling,

eye, ear, nose and throat, and Dr. Hugh C. Jones, internal medicine, laboratory and x-ray. Dr. Byrum will continue to practice in surgery and gynecology, and will have complete laboratory and x-ray facilities in connection with his office.

TULSA COUNTY MEDICAL SOCIETY started its year of usual superactivity September 22 by hearing an address by Judge H. C. Myers, of the State Industrial Commission on "Industrial Insurance and Its Relation to the Physician." Reports were heard from the following committees: Insurance, Dr. W. G. Lemmon; Business, Dr. T. W. Stallings; Milk, Dr. A. W. Pigford; Legal, Dr. H. S. Butler; Legislative, Dr. Chas. P. Johnson; Entertainment, Dr. P. N. Atkins. Other matters of a routine nature were disposed of.

MUSKOGEE COUNTY MEDICAL SOCIETY opened its big guns for the coming year with a feed at the Hotel Severs, with Dr. L. H. Moorman, Oklahoma City, as the piece de resistance, who read a paper on the early signs, symptoms and diagnosis of pulmonary tuberculosis. No speaker has ever received more profound or such deserved attention as did Dr. Moorman in his masterly effort. It is regrettable that every society and physician charged with the grave responsibility of early recognition of tuberculosis cannot hear the address of Dr. Moorman as delivered at Muskogee. Dr. William A. Tolleson, the veteran Secretary of the McIntosh County Medical Society, delivered an address on "The Value of the Medical Society to the Physician," which was deep in thought, and of greatly appreciated value.

COMMITTEES of the State Medical Association called together at Oklahoma City, Friday, September 26, heard preliminary reports from several committees recently designated to undertake special work. At this meeting provisional itinerary for Dr. Morris Fishbein, of the American Medical Association was adopted. This itinerary appears elsewhere in this issue and is especially called to the attention of the profession in Pittsburg, Atoka, Coal, Bryan, Choctaw, Carter, Oklahoma, Grady, Garfield and Tulsa Counties and counties adjacent to them. Dr. Fishbein will appear on the dates designated in each of the counties named on October 21, 22, 23 and 24. Reports were read from the committees on Scientific Sections and Section Work; the gist of report being that section affairs should be left in the hands of elected chairman as heretofore practiced. Committee on Scientific and Educational Exhibits reported that commercial exhibits were to be handled as heretofore, but that efforts should be made to stimulate the exhibition of scientific matters if material was obtainable. The Library Committee reported that a library be organized to be controlled by the State Medical Association. The Committee on Health Problems in Education recommended "cooperation of Public Health Department of the State and this committee with the Superintendent of Public Instruction in advising a course of public Health Education for all teachers of the state, who will be responsible for health education, able to determine who is a normal child, such teachers to be trained and certified at summer institutes, and that work for health be recognized as of equal importance with any other school subject. That physicians should encourage the county unit health center and back it to the limit as our strongest state laity educational force." Other matters of public health import were endorsed, "Hygeia" coming in for favorable men-

tion, as did coordination of effort and avoidance of unnecessary duplication of energy and effort in public health expenditures. It was also recommended that county medical societies devote one evening in its yearly work to the consideration of these and allied matters.

### DOCTOR CHARLES EDGAR KAHLE

Dr. C. E. Kahle, for twelve years one of the leading physicians of Drumright, died September 1st, 1924. He was born on February 12, 1867 at Kahletown, Pa., and was a graduate of the Medical College of Indiana, in 1897. Dr. Kahle practiced in West Virginia, and for two years at Oklahoma City, before coming to Drumright. He was active in his profession, and respected and honored both by his colleagues and his patients. He leaves a brother, Clarence, a druggist of Bartlesville.

Dr. Kahle was a Fellow of the American Medical Association, and a valued member of his County and State organizations.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.

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### ORTHOPEDICS IN TUBERCULOUS CHILDREN.—Paul W. Giessler, M.D.

Of the fifty tuberculous children found to have orthopedic conditions there were seven having tuberculous bone involvement, fifteen having scoliosis, twelve poor postures, and thirty-four pronated feet. Several had more than one defect. The muscle tone seems diminished and the powers of activity decreased in these children altho the number examined is too small to warrant definite conclusions.

### THE ROENTGEN DIAGNOSIS OF PULMONARY TUBERCULOSIS IN CHILDHOOD.—R. G. Allison, M.D. and R. W. Morse, M.D.

Primary infection takes place thru inhalation and nearly always occurs in the lung parenchyma. Secondary involvement of the regional lymph nodes then occurs during periods of lowered vitality. Prognosis depends upon the age at which infection takes place, the younger the child the graver the prognosis. The adult type is always a secondary infection and very serious when occurring in children.

Stereoscopic chest plates of seventy children at the Lymanhurst School were studied. These pupils were from eight to sixteen years old. Fifteen showed no demonstrable evidence of tuberculous involvement of the lungs or glands, fifty-five showed definite evidence of tuberculous infection. A primary lung focus with involvement of the glands at the root of the lungs was detected in forty-nine. Enlargement and calcification of the hilus glands without evidence of a primary focus was shown in three cases. There were three cases of the adult type.

### SOME GASTRO-INTESTINAL DATA IN A GROUP OF TUBERCULOUS CHILDREN.—Charles Benjamin Wright, M.D.

This study was made to find out what could be done from a gastro-intestinal standpoint to assist in the better understanding and care of these cases, to study the gastric chemistry and motility, to learn the frequency of pus and bacteria in the stomach and to learn something of the frequency and cause of visceroptosis.

It was found that the gastric capacity and chemistry in children over seven are much the same as in a similar series of adults. Thirty-nine of the forty-eight cases showing pus in the gastric contents after the Ewald meal had open infections of the teeth, tonsils or sinuses. The stomach is much further to the right in children and there is little if any relation between the intercostal angle and the position of the stomach. Low stomachs are common in children and the percentage seems to increase with age. The liver, spleen and right kidney are frequently palpable but these do not seem to bear any relation to each other nor to the position of the stomach. While weight has some relation to the position of the stomach it is not definite and other developmental and possibly toxic factors seem more concerned in visceroptosis.

### INCIDENCE OF INFECTION OF MOUTH, NOSE, THROAT AND EAR IN TUBERCULOUS CHILDREN.—Carl W. Waldron, M. B. (Tor.), D.D.S.

These children show a higher incidence of oral and tonsillar infection than exists among the other Minneapolis school children. This may be partly due to the fact that the knowledge of the presence of tuberculosis largely absorbs the attention of both parents and workers. Tuberculous children especially need thoro prophylactic, surgical and restorative dental measures to insure a clean mouth and efficient mastication. Extensive caries and gingivitis contribute to tonsillar infection. Co-operation between dentist and surgeon is necessary as these conditions should be corrected before a tonsillectomy is done.

### THE VALUE OF THE DETERMINATION OF THE VITAL CAPACITY OF THE LUNGS IN THE DIAGNOSIS AND PROGNOSIS OF PULMONARY TUBERCULOSIS IN CHILDREN.—Chester A. Stewart, M.D., Ph.D., and O B

The average vital capacity of the lungs of 167 Lymanhurst and Trudeau children was practically normal. While this test is of some value in the diagnosis of pulmonary tuberculosis its greatest value is in determining the prognosis. Individual vital capacity should vary little, thus the presence of a decreasing vital capacity indicates active and progressive disease, an increasing or stationary capacity indicates that the disease is either quiescent or subsiding.

### A STUDY OF THE BASAL METABOLISM AND THE THYROID GLAND IN A GROUP OF TUBERCULOUS CHILDREN.—C. A. McKinley, M.D.

The ten undernourished tuberculous children here studied all showed thyroid enlargement but no signs of hyperthyroidism. The fact that the basal metabolism rate appears to be higher in

under-weight children together with the difficulty in ascertaining normal standards make this test of little value in differential diagnosis of tuberculosis and hyperthyroidism. In comparison to one standard, one case, to another, seven cases, showed estimated basal heat production definitely above normal.

**A COMPARISON OF THE HEIGHT-WEIGHT INDICES OF SUSPECTED TUBERCULOUS AND NORMAL SCHOOL CHILDREN.**—Richard E. Scammon, Ph.D.

Between one-half and three-fifth of the first 100 children examined at Lymanhurst were below the typical height-weight index for age and about two-thirds were below the index for height. There was no sex difference for age, but the boys were above the girls in the index for height. There were fewer of those under 10 below the index than of the older ones. The younger ones, who were also frequently the shorter ones, were most often above the index. The figures would seem to indicate that the taller and older children weigh less relatively than the shorter and younger ones in this group.

**OBSERVATIONS ON THE NEUROLOGIC AND MENTAL STATUS OF A GROUP OF TUBERCULOUS CHILDREN.**—Charles E. Nixon, M.D., Ph.D.

Since tuberculosis is one of the few factors capable of altering the germ plasm in one generation it is an important factor in the production of nervous diseases as the chronic toxic condition brings about both organic and structural changes.

The most frequent findings in the neurological examination of 55 of the Lymanhurst children were large pupils and nystagmus or nystagmoid movements, inequality of pupils, impairment to the reaction of light, prominence of the eyes and inequality of the eye slits. Sixteen of the older children complained of being nervous and most of them displayed objective nervousness. Fourteen showed marked tremor of the extended hands and seven a moderate tremor. Knee jerks were normal in about one-half while the other half were hyper-active. Seventeen of the children showed normal mentality, three above normal, fifteen slightly retarded, ten "dull", seven borderline and two distinctly feeble minded. These children were all retarded about one year in school, there being more distinctly ill children in the more retarded groups. The duller children were doing better in their school work than would be expected because of the special attention received and the type of life lived.

**A STUDY OF THE CLINICAL AND PHYSICAL FINDINGS AND THE TUBERCULIN REACTIONS IN A GROUP OF TUBERCULOUS CHILDREN.**—Edward Dyer Anderson, M.D.

Early diagnosis is especially important in children because of the good prognosis if properly treated. It differs widely from the adult type and must be carefully studied. The clinical history, physical findings, x-ray, and tuberculin reaction must all be borne in mind when making a diagnosis. It is sometimes impossible to determine whether the condition is active or not, for the sake of the child it should then be treated as active.

The most frequent clinical findings in the group

of children were malnutrition, a daily rise of temperature and a history of exposure. The most important physical findings were a positive D'Esquigne's sign, inter-scapular dullness, flatness of the chest and a slight apical dullness. Ninety-five percent gave positive von Pirquet reactions, three children who from history, physical and x-ray examination were considered actively tuberculous giving negative reactions. The severity of the reaction seems to bear little relation to the condition of the child.

**OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
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**REFLECTIONS ON CONGENITAL SYPHILIS.**

—Leonard Findlay, *American Journal of Dis. of Children*, August, 1924.

The author believes that the importance of this condition does not depend upon its frequency but upon the fact that we have means of almost completely eradicating it. Its incidence has been grossly exaggerated. He considers a positive Wassermann reaction as the most delicate and reliable test and the best grounds on which a diagnosis can be made. He has the utmost confidence in it, when properly carried out, and does not think it can be set aside in favor of the Sachs-Georgi reaction. However, a positive reaction in the new born is not necessarily proof of syphilis. The antibodies may pass from the mother to the child without the spirochetes. In this case, the antibodies are gradually eliminated, no new ones being formed. The child's serum becomes negative in the course of a few weeks.

Routine Wassermans in children's hospitals ranged from 0.3 percent to 4.2 percent positives. The series giving the smaller percentage was on a scarlet fever service. Cruickshank ran a large series of Wassermans on unselected mothers in a maternity hospital with 9.04 percent positives. Wassermans on placental blood from a large series of new borns in the same institution showed 4.2 percent positives. But in following these cases for 19 months only 0.3 percent of the total number remained positive and could be definitely considered syphilitic. Attention is called to the shortness of the period of observation and the fact that a few cases of syphilis tarda may show up later. But it is estimated that less than 1 percent of the infants and children of the city (Glasgow) are infected. The importance of syphilis has been overestimated as an etiological factor in a great many conditions—such as idiocy, marasmus, malnutrition, etc.

A positive Wassermann was regularly found in cases of frank syphilis; it was occasionally positive in a list of diseases known to be sometimes syphilitic and; almost invariably negative in disease in which we are not justified clinically in classifying as syphilitic.

The evidence collected is opposed to there being a special neurotropic variety, but tends to confirm the view expressed by Mott that neurosyphilis is the result of and infection with an attenuated form.

The treatment is divided into prophylactic and curative. The author thinks the latter is a failure. With the newer preparations the disease is probably not so dangerous to life as in pre-arsphenamine days and many children are now saved who previously would have died. But a real cure—

determined by the disappearance of all symptoms and a persistently negative Wassermann—is effected in only a minority of cases. Especially is this true in cases showing late manifestations in older children. In the past few years there has been a decline in the percentage of cases reported cured. Contrasted with this, the results of prophylactic treatment—treatment of the pregnant mothers—is very effective. In some fifty cases of pregnant, syphilitic mothers treated, all but three gave birth to living, non-syphilitic babies. All of the mothers had positive Wassermanns at the time their babies were born. Several of the babies had positive Wassermanns at birth but these became negative in the course of some weeks.

The author concludes that our hope for eradication of congenital syphilis lies in prophylaxis.

**THE FOOD REQUIREMENTS OF MALNOURISHED INFANTS, WITH A NOTE ON THE USE OF INSULIN.—W. McKim Marriott, M.D.—J. A. M. A., Aug. 23, 1924.**

The writer points out that a malnourished infant requires more food per unit of body weight than does a normal infant. This is due to the greater heat output per pound of body weight during rest and the greater need of material for growth if normal development is to be ultimately attained. Not only must the malnourished infant receive more total calories per pound, but it must have more of the elements, such as protein and mineral salts, essential to the construction of body tissues. These infants usually require practically the same total amounts of food as normal infants of the same age. So if an undernourished infant weighs only one half of what it should weight for its age, its food requirements will be in the neighborhood of 100 calories per pound and the milk requirements somewhere in the neighborhood of three ounces per pound of body weight. On account of the diminished digestive capacity it is not always possible to give such infants sufficient food to meet the requirements. Efforts to do so with the use of ordinary sweet whole milk dilutions or cream mixtures are usually unsuccessful. At times even breast milk can not be given in sufficient quantities to bring about a gain. Its caloric value may be increased by adding corn syrup or dried milk—without increasing the volume. Cows milk acidified with lactic acid and enriched by the addition of very considerable amounts of corn syrup is a readily digestible food of high caloric value. This type of feeding has been discussed by the writer in another paper.

Some infants fail to gain even when given these high caloric feedings. Here it is necessary to resort to means for increasing the capacity for utilizing food. The most effective means in the writer's experience is blood transfusion. He uses citrated blood and gives about one ounce of blood for each three pounds of body weight. Another successful method of starting a gain of weight is the injection intravenously of one-third to one-half ounce per pound of body weight of a 20 percent solution of glucose—containing 15 units of insulin per 100 c.c. The injections may be given daily over a considerable period of time and in the writer's experience the results have been uniformly successful. A gain in weight almost invariably occurs, even in infants suffering from infection. This weight is not subsequently lost when the

injections are discontinued. The insulin injections were used only in the extreme cases of malnutrition and athrepsia.

**THE OVERWEIGHT CHILD.—Borden S. Veeder, M.D., J. A. M. A. Aug. 16, 1924.**

A great deal of attention has centered in the past decade on the question of normal standards, prevention, management, etc., of the undernourished child. But very little has been said of the overweight child. The writer has observed a group of more than 200 boys in a private school of the country day type during the past four years. The boys ranged in age from nine to seventeen years, came from good families and had good home care. In this group the overweight boy was as much a problem as the underweight. Each year seven or eight per cent of the number were underweight and about the same per cent overweight.

Attention is called to the fact that standards cannot be absolutely followed. In the overweight child the body type of habitus plays a greater role than with underweight. The statement of Emerson that when the excess of body weight is greater than 20 per cent the child is obese is not an absolute rule. Under this condition some children are decidedly obese while others present particularly fine, muscularly developed specimens. In this paper the writer discusses only those children who are not only 20 per cent or more above weight, but who, to the casual observer, are unquestionably "fat" or obese.

An analysis shows two groups: (1) those with an irregular disposition of adipose tissue with other physical abnormalities indicative of endocrine disturbances; (2) those with an ordinary obesity showing a generalized distribution of fat and no abnormalities indicative of endocrine disturbances. The groups were about equally divided. In this second group, one or both parents were found to be overweight in every instance. There was no lowering of the basal metabolic rate. The author feels that this condition is largely hereditary. Of the other group, one showed hypergonads, another presented a typical Froelichs syndrome and the others showed a pelvic girdle adiposity—commonly thought to be from pituitary disorders. None of these cases seemed to be hereditary.

The overweight child presents a problem because of his inability to fit in with the regular play and athletic program and his marked susceptibility to minor injuries. He is too heavy to fit in with the hard exercise or play with boys of his own age and too young and immature to play with older boys of his own weight. He is decidedly awkward in games requiring skill and has a tendency to stay out and loaf—hence not getting sufficient exercise. Minor sprains and accidents are frequent, as students they usually do well and present no difficulty.

The writer has found the overweight child more difficult to manage than the underweight—partially due to absence of any physical defects to be remedied. His therapy was practically limited to dietetics and increased muscular exercise. The latter is quite a problem on account of the tendency towards injuries. His plan as to diet is to hold the child to his present weight for an indefinite time—with exercise. This allows the natural process of growth to automatically lower the excess of fat. He feels that it is dangerous to restrict the diet to the extent of causing much less of weight. A few pounds were taken off by a

rigid restricted diet for a week or two and then the weight was held to the same level for a long time. The protein requirements were always met and as many calories of carbohydrates and fats were given as could be without putting on weight.

So far as the author knows, the degenerative changes that go with obesity of older people do not occur in childhood. The chief reason for intervention is the failure of the child to adjust himself to his environments.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.  
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#### **THE VALUE OF VOLUMN INDEX IN THE DIAGNOSIS OF PERNICIOUS ANEMIA.—Russell L. Haden, M.D., Kansas City, Mo., Journal of A. M. A. Vol. 83, No. 9.**

The author states that a color index greater than one is usually regarded as the most constant and characteristic blood finding in pernicious anemia. The color index is the relative amount of hemoglobin contained in each red cell as compared to normal blood. It is obtained by dividing the percent of hemoglobin by the percent of red cells using 5,000,000 red cells as 100 percent. He notes that because the hemoglobin readings are likely to vary so in different laboratories and by different individuals that it is a very uncertain diagnostic measure.

The volumn index of the blood is the relative volumn of the individual red cell compared to a normal red cell. It is obtained by dividing the percent volumn of cells as obtained by centrifuging a known quantity of blood, by the percent number of red cells in a red blood count, using 5,000,000 as normal. This shows the relation of the mass of cells to the number, while the color index shows the relation of the color of the cells to the number.

Dr. Haden suggests a third index which he calls the "saturation index." The term "specific hemoglobin content" and "volumn color index" have also been applied to this factor. It is the hemoglobin content or color per unit volumn compared with the normal. It is calculated by dividing the percent of hemoglobin by the percent by volumn of cells.

He summarizes his findings in 171 cases as follows:

In normal adults, the indexes are usually less than one and seldom greater than one.

A plus volumn index is a constant finding in pernicious anemia. It is present even in early cases in which other qualitative changes are not apparent. The color index is never greater and is usually less than the volumn index. The saturation index is never greater than one.

A plus volumn index together with the absence of free hydrochloric acid in the gastric juice in practically pathognomonic evidence of pernicious anemia.

W. H. B.

#### **PERSONAL EXPERIENCE WITH THE CULTIVATION OF TUBERCLE BACILLI AND THE USE OF THE GUINEA PIG AS A DIANOSTIC TEST ANIMAL FOR TUBERCULOSIS.—H. J. Corper, M.D., Ph.D., Denver, Colo. Jr. of Lab. and Clin. Med., Vol. IX, No. 11, Aug. 1924.**

##### **Culture of the Tubercle Bacilli.**

The preferred method of isolation of tubercle

bacilli is Petroff's sodium hydroxide combined with gentian violet egg medium. Human bacilli grow better when glycerol is added. Bovine bacilli better without glycerol. Laboratory strains grow well on glycerol agar or broth. Individual strains show variations in growth on different media. No method to hasten growth is known. Old cultures lose their viability in ice box or incubator and should be transferred monthly.

##### **Inoculation of Guinea Pig.**

Subcutaneous inoculation is preferred when time is an important factor. Injected material should first be treated with sodium hydroxide, especially if from contaminated sources, and neutralized. As soon as local findings warrant the glandular contents are examined. Intravenous, intracardiac, intrahepatic and intraperitoneal injections result in rapid generalized disease but does not develop earlier than local disease following subcutaneous or intracutaneous inoculation of equal doses. The disadvantage of the two latter methods of inoculation for diagnostic purposes is the necessity for complete examination of entire animal when no visible external signs of the disease exist. There are no practical methods of hastening the development of tuberculosis in guinea pig for diagnostic purposes.

L. E. W.

#### **THE DICK TEST—SOME SUGGESTIONS FOR ITS PRACTICAL APPLICATION.—Wesley E. Gatewood, M.D.; Iowa City. Journal of the American Medical Association.**

1. Practical application of the Dick Test in scarlet fever.
2. To determine the susceptibility of various persons who are frequently exposed, determining which ones should be immunized.
3. In uncertain cases as a means of early diagnosis.
4. In recognizing those who are susceptible and in need of active or temporary passive immunity after exposure to scarlet fever.
5. Reliability of Test.

Data of results of the application of the test is small but from the reports in literature and from the experience of the Author of this article it seems that this test may serve as an aid in early diagnosis of scarlet fever. Early positive reactions are additional proof of the disease being scarlet fever and a negative test is against scarlet fever. Late, a positive reaction is not indicative of scarlet fever provided sufficient time has elapsed for development of immunity.

L. E. W.

### **EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
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#### **POSTOPERATIVE ADHESIONS OF THE VITREOUS TO THE CORNEA.—Cottle, M. H. Am. J. Ophth., 1924, vii, 263.**

The author reports four cases of adhesions of the vitreous strands to the corneal wound following the discission operation with knife needles for secondary cataract. The slit lamp permits easy and early recognition and observation of these synechiae. They originate in the vitreous itself—not from the secondary membrane. Their structure varies in texture and strength. Depending

upon the structure and direction of the fibers irregularities of the pupil occur. The synechiae do not tend to disappear spontaneously.

The occurrence of this complication probably depends on the composition of the vitreous, or the operative technique used, or both. It is possible that the delicate fibers of the ligamentum hyaloideocapsulare are pulled into the wound and undergo a change due to a low grade inflammatory reaction or a chemical change which causes them to become coarse and tough. In all of the cases the incision was made at an appreciable distance from the limbus. The shape of the knife, the depth to which the knife is plunged in the vitreous, and the method of its withdrawal may be other factors.

The synechiae may cause complications such as secondary glaucoma, late infection, and prolapse of the vitreous.

#### SUPPURATIVE LABYRINTHITIS.—Lillie, H. I. Surg. Clin. N. Am. 1924, iv, 513.

Experience with labyrinth diseases has shown that by far the most important factor in the successful management of this condition is the correct diagnosis. It is known that destruction of the function of the labyrinth by disease process may be followed by recovery without operative interference and without further labyrinthine symptoms. In daily practice cases of non functioning labyrinths may be encountered in which there are no signs or symptoms of active labyrinth disease. In such instances, interference does not seem warranted, as natural processes have accomplished the desired result.

The author reports four cases representing certain types of labyrinth disease. Case 1. Toxic or metastatic labyrinthitis; Case 2, circumscribed suppurative labyrinthitis followed by diffuse suppurative labyrinthitis; Case 3, chronic suppurative otitis media and mastoiditis with acute suppurative labyrinthitis, facial paralysis and meningitis; and Case 4, suppurative and chronic otitis media with mastoiditis, diffuse suppurative labyrinthitis, and cerebellar abscess.

#### A MODIFICATION OF AN OLD BUT SAFE INSTRUMENT FOR THE COMPLETE ENUCLEATION OF THE TONSIL.—Shekter, A. J. Laryngoscope, 1924, xxxiv, 276.

In the author's opinion, the old Beck-Schenck or Beck-Mueller instrument is the safest for beginners. In competent hands the Sluder instrument is safe, but the most competent operator meets with accidents if he employs this instrument routinely.

Shekter describes a new instrument for the enucleation of the tonsils which is modeled in general after the Beck-Schenck snare, but unlike the latter has the advantages of a Sluder handle and trigger arrangement for pulling up on the wire loop. It has also the advantage of easy manipulation. The handle is removable and adjustable. It is a safe instrument for the beginner. The operative technique is similar to that of the Beck-Schenck method.

#### TRAUMATIC ABSCESS OF THE NASAL SEPTUM IN CHILDREN, WITH A REPORT OF FIVE CASES.—Yerger, C. F. Illinois M. J., xiv, 278.

Conditions presenting a picture somewhat similar to that of traumatic abscess of the nasal sep-

tum are: (1) syphilitic gumma of the septum, (2) polypus, (3) hypertrophy of the inferior turbinates, and (4) thickening of the deflected nasal septum with soft hypertrophy of the mucosa.

The prognosis of traumatic abscess of the nasal septum depends upon the promptness of treatment. The latter should consist in measures to obtain adequate drainage of the abscess, to combat symptoms of infection and to prevent deformity.

To prevent deformity early replacement of the separated mucoperichondrium to the cartilage is essential. Therefore drainage should be dispensed with as early as possible. To aid in the approximation of the flaps, the author prefers the largest rubber drainage tube than can be employed in the nostrils and the use of gauze packing as indicated. The tube and gauze splint are left in place for one week and then replaced, if this is desirable, by an ordinary perforated, hollow, hard rubber splint which is used for three weeks.

The author draws the following conclusions:

1. Traumatic abscess of the nasal septum is relatively rare, considering the frequency of nasal trauma in children.

2. It occurs as a rule in early childhood and is the result of slight trauma. On account of the insignificance of the trauma many of the cases are not recognized.

3. Unrecognized or neglected cases result in unsightly nasal deformity.

5. In every case of injury to the nose in children a careful examination should be made for evidence of a septal haematoma or abscess.

#### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

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#### 1. DISLOCATIONS.

##### RECURRENT OR HABITUAL DISLOCATION OF THE SHOULDER JOINT.—A. S. Blundell Bankart. British Med. Jour., Dec. 15, 1923, p. 1132.

This disability may almost be said to be peculiar to athletes and to epileptics. The dislocation is nearly always anterior. It has been thought to be due to abnormal laxness of the capsule, to weakness of the surrounding muscles, and to imperfect healing of an ordinary traumatic dislocation. The various operations for its relief have had as their object the lessening of the size of the capsule, by plecting or giving it additional support, by transplantation of the muscle. Only those operations which have definitely limited the range of movement of the shoulder joint have succeeded in preventing redislocation, and this probably because of such limitation.

Recurrent dislocation has nothing in common with ordinary traumatic dislocation, which occurs through the anterior and lower portion of the capsule and which heals readily and permanently. It is caused by direct violence against the head of the humerus from behind, causing it to shear off the fibrous capsule of the joint from its attachment to the fibrocartilaginous glenoid ligament. There is no tendency for the detached capsule spontaneously to unite with the fibrocartilage. Hence the dislocation recurs.

The detachment of the capsule from the fibrocartilaginous glenoid ligament is the essential feature in recurrent dislocation. The author's

operation for cure exposes completely the anterior margin of the glenoid cavity through an incision from the upper border of the clavicle above the coracoid, downward and outward for about five inches. The deltoid and pectoralis major are separated and the coracoid defined, divided with the osteotome or boneps, and drawn downward with its attached muscles. Then tendon of the subscapularis is divided close to its insertion and retracted inward exposing a rent between the glenoid ligament and the capsule proper. The rent is repaired with interrupted sutures of silkworm gut passed between the free edge of the capsule and the glenoid ligament: the divided subscapularis tendon is reunited, the detached coracoid process reattached, and the wound closed. The arm is kept at rest four weeks and then given active and passive movements. The author reports four cases, with complete restoration of function in three, and with no recurrence in any one of them.

## 2. FRACTURED SPINE.

**PRACTICAL CARE AND TREATMENT.**—W. C. G. Kirchner, Surg. Gyn. and Obst., June 1923, p. 830.

The author states that diagnosis and surgical treatment of this lesion have received much attention recently but little has been said about many important details in the management of these often difficult and discouraging cases, especially those associated with extensive paralysis. He reports in detail a case of fracture and dislocation of the third and fourth lumbar vertebrae with paralysis of lower limbs and loss of control of itus, cellulitis, cystitis, impacted feces, etc. The bladder and rectum, with complications of decub-detail of nursing, the uses of plaster shell and cast, hammock suspension of limbs from Balkan frame, surgical care of bed sores, and other practical points are discussed. By extreme patience and care a favorable result was obtained in a hopeless type of case.

## 3. CONGENITAL DISLOCATIONS.

**BILATERAL HIP DISLOCATION IN A FOETUS OF FIVE AND ONE-HALF MONTHS.**—M. Van Neck. Arch. Franco-Belges de Chir., Jan. 1924.

This is the description of a specimen of unknown origin. The foetus is normal with the exception of the hips. Ossification of the femurs and pelvis is normal. The acetabula are small and shallow. The femoral heads are flattened but of normal size. There is no normal torsion or change in the angle of the femoral necks.

## BOOK REVIEWS

**THE SURGICAL CLINICS OF NORTH AMERICA.** (Cleveland Clinic Number.) (Issued serially, one number every month.) Volume 4, Number 4. (Cleveland Number, August 1924), 248 pages with 218 illustrations. Per clinic year (February, 1924 to December 1924.) Paper \$12.00 Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

While this entire issue is of importance to

various interests in medicine and surgery, especial importance must be granted the chapters on "Factors Governing Mortality in Operations for Hyperthyroidism," by Geo. W. Crile; "A Clinical Discussion of Tumors of the Breast" by Frank H. Bunts; "Subphrenic Abscess" by John Phillips; "Application of X-Rays in Diagnosis of Gall-Bladder Disease," B. H. Nichols; "Importance of Diagnosis of Vincent's Angina," T. E. Jones; "A Clinical Discussion of the Diagnosis, Treatment and Prevention of Diabetes," by Henry J. John. This latter is of unusual interest and is here noted in part as follows: John believes that (1) obesity of sudden development, (2) glycosuria, (3) fasting 12 hour blood sugar, 130-165 mg. per 100 c.c., (4) blood sugar content of 130 mg. per 100 c.c., or above three hours or more after the last preceding meal, and, a familiar history of diabetes—are predominant features and that if these signs, symptoms and findings were early recognized and treated, 90 per cent of diabetes could be prevented. Certainly important food for thought.

**INTERNATIONAL CLINICS**, a quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, etc., etc., etc., and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world; edited by Henry W. Cattell, M. D., Vol. III, thirty-fourth series, 1924; J. B. Lippincott Company, Philadelphia and London, 1924.

This issue is especially valuable as it contains many colored plates illustrative of the Dick reaction in scarlet fever by Abraham Zingher, New York; "Progress in Dental Hygiene," by Captain R. W. Leigh, A.B., D.D.S., Washington, is so important, dealing with subjects too long and too much ignored by the average practitioner, that further discussion of it seems futile and not worth while, when the final and fatal consequences of dental neglect are recalled, if they are coupled with the years of warning which have already passed in review before the medical minds of the country. "Management of Peptic Ulcer" by Frank Smithies, Chicago, of course will demand the close attention of students of that problem.

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### ARTIFICIAL PNEUMOTHORAX\*

HORACE T. PRICE, M.D.  
TULSA, OKLAHOMA

"No more hopeful ray of sunshine has ever come to illumine the dark kingdoms of disease, than that, introduced into the path of the consumptive, through the discovery of artificial pneumothorax," writes Riviere (1) in the introduction to his book, on this subject. Yet, we must not accept this as meaning that all cases of pulmonary tuberculosis can be cured by this measure, although it has outlived the customary two years of tuberculosis cures, and that we have not yet found any one plan of treatment, sufficient for all cases. There are surely disappointments connected with any treatment of this disease and pneumothorax has not answered all requirements in overcoming such, and is available, only in connection with the old method of rest, air and food which are not to be omitted in any case.

Just a few words as to the history of this form of treatment. In 1821 Carson used it on animals, but it was not further considered until 1832 and in 1837 favorable results were noticed following spontaneous pneumothorax. In 1880 Toussaint and later in 1882 and again in 1888 Forlaninni brought the subject forward. In 1888 Potain reported three cases so treated. In 1898 J. B. Murphy urged its use and treated several cases. In 1899 Schell treated a case of hemoptysis with pneumothorax. In 1901 Lemke reported 53 cases of tuberculosis treated by this method. Following these, the technique has been improved and the use of the method has spread to all parts of the world; it is used by all investigators and is as successful as any special form of treatment.

Artificial pneumothorax collapses the lung to a greater or lesser extent, depending upon the amount of air injected which in turn depends on the desire of the operator and the condition of the pleural space. In many cases, large quantities of air have been used, say 1000 to 1200 cc., giving a complete collapse, such as often seems necessary in hemor-

rhage or abscess but more recently there has been a tendency to a more selective collapse as advocated by Barlow and Kramer (2) and Hennell and Stivelman (3) in which use is made of more frequent injections of from 200 to 400 or 500 cc., with which it is thought that the diseased portion of the lung is compressed while allowing the more elastic healthy tissue to expand. With this, it is claimed, that there are not the violent changes of the larger injections and that the final expansion of the lung when treatment is stopped is easier. It also lessens the chance of plural shock and the intrathoracic equilibrium is better maintained which is well shown by Stivelman, Hennell, Golemke (4) to impair the heart action and the pressure of the mediastinum when large injections are given. At the first injection, the air is shown to compress the healthy tissue, more than the diseased, but later injections do the opposite. I have, for some time, been using these two to three or four hundred cc. injections, at intervals of at first two to three days, then once a week up to two, to finally four weeks apart and believe I get better results. There is certainly less tendency to pleural shock, or to rupture, through a weak spot, than with a sudden large injection. I have personally not injected air into both lungs in bilateral diseases but it has been so used, with success, in some cases.

The best cases, for the use of pneumothorax, are the early cases where one would expect to get the best results. On the other hand, they are mostly the cases which least require special treatment, as they are quite apt to get well with the ordinary rest cure under the proper guidance, either in a sanatorium, or the home; so that a moderately advanced unilateral case is the one of choice. The further advanced the case, the more chance there is of this treatment causing a lighting up of trouble on the opposite side, for the further along the disease on one side, the more certain is a focus to be found on the opposite side, whether it be slight in extent, and active, or whether it be an old inactive peribronchial lesion. I have seen a good many cases of far advanced tuberculosis brought back to a working condition which has lasted for several years so that not any case can be denied the benefit of a trial,

\*Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

though no guarantee should be given. There are not many contraindications but asthma, advanced emphysema, severe heart disease, nephritis not attributable to purely a tuberculous toxic effect and advanced tuberculosis of the bowels are the principle ones. The greatest difficulty, is the frequent inability to find a large enough pleural space, as there are so often adhesions holding the two surfaces together. At times, it is impossible to find such an opening and several punctures may be necessary to demonstrate that or to find a small space. Frequently, one can find a small opening, which gives a very slight fluctuation but by feeding slowly one can often get in several hundred cc. of air where at first that would seem impossible, the air trickling between adhesions into other pockets and getting some result. In such cases it is probably not well to give large installations even though that could be done, as one might easily tear the adhesions and cause an effusion as has been done by the use of the cautery in the purposeful severing of adhesions. There are 50 per cent, or more cases, will show an effusion at some time during the course of treatment. A small amount may not be known to be present. A larger amount may be recognized but without attention being paid to it; but when it becomes so large that it causes cardiac oppression a sufficient amount should be withdrawn and air injected in its place. This exudate should be kept down, to some extent, as it has a decided tendency to form adhesions. The formations then of numerous adhesions after many refills, often closes the space to such an extent that further treatment is impossible. Having a fluid present, one always dreads the possibility of its becoming purulent, either pyogenic or tuberculous, as has been shown by Peters and Wooley (5). Gwerder (6) says that effusions are less common with what he calls low tension than compression pneumothorax, by the latter, meaning a high plus reading on the manometer scale.

In addition to tuberculous, pneumothorax has been frequently attempted, sometimes with success, in bronchiectasis, and should always be tried before operation in lung abscess and is almost always successful in pulmonary hemorrhage, if the side from which the bleeding comes, can be located.

The apparatus simply consists of two bottles; one filled with sterile water, to which is added, an antiseptic, the water displacing the air and forcing it through a rubber tubing, having a cotton filter, into the pleural space. One of these bottles should preferably, be movable, so that it can be elevated or lowered, as desired. There is attached a scale,

which shows the number of cc. of air leaving the bottle. There is, also attached, a water manometer, with the water colored, so that it may be easily read; which shows the intrapleural pressure before and after injecting the air. Before injecting, the reading is always minus, or below the zero mark and when in a free pleural space, shows marked fluctuations, when not in the space, no fluctuations, when in a very limited pocket due to adhesions, there is a very slight fluctuation, at times I have seen none, when a few cc. of air, however, cautiously given, will bring about a proper fluctuation by opening up the pocket. A small caliber needle gives a smaller fluctuation than a large needle; and a large needle, such as the Floyd, which is very blunt, should always be used for the first installation, to avoid the danger of going through both leaves of the pleura into the lung. After the first injection, one may use most any size needle but it should have a blunt point. The patient should lie with the affected side upward, with the arm raised above the head, to widen the intercostal spaces, with his face preferably turned from the instrument. The site of injection should be determined by percussion and auscultation and by the use of the X-ray which latter should be used afterward, if possible. Although there is no degree of pain, one should carefully anesthetize with some solution as novocaine, being as thorough as possible, in treating the pleura, so as to avoid any shock which might result from going through that layer, with a large needle. As stated, the initial reading will be minus, or below the zero mark. As the air is injected, the reading will rise on the manometer, and the first injection should not carry it much above the zero mark. At the refills, it may be gradually carried up to 2 plus then to 4 plus then to 6 plus and not higher unless one desires a fairly complete collapse.

This degree of pressure, will, to some extent, compress the lymphatic and blood vessels and cavities, thereby lessening the toxic emanations from the diseased portion, bringing about a lessening of the symptoms, due to toxicity. At first, there may be an increase in the cough and expectoration, which soon subsides and the patient feels quite improved.

In conclusion, I should say that we have here, a most valuable agent, which has been well tried and proven its worth.

1. Clive Riviere-Pneumothorax of Pulmonary Tuberculosis 1917.
2. Barlow and Krainer-American Review of Tuberculosis, April 1922.
3. Hennell and Stivelman-American Review of Tuberculosis July 1923.
4. Stivelman Hennell and Golemke-Intrathoracic Equilibrium in Pneumothorax. American Review of Tuberculosis, April 1922.
5. Plural Effusion-Peters and Woolley-American Review of Tuberculosis, October 1922.
6. Gwerder-Low Tension Pneumothorax-Tubercle, October 1922.

*Discussion:* C. J. FISHMAN, M.D., Oklahoma City.

Anyone who has seen patients with tuberculosis struggle along even under good, careful, proper management, of rest, fresh air, food, with the other hygienic procedures that are usually carried out, and then watch the marked improvement after a pneumothorax, cannot fail to be impressed by the value of this procedure. I feel that artificial pneumothorax is a step in advance in the management of tubercular conditions far above any single procedure except the rest cure, that has been suggested in recent years. I feel also that this is one of the steps of management in disease in which the pendulum has swung too far in its favor. I believe, on the other hand, there is still room for its use, and the indications for its treatment have not been broadened far enough. Undoubtedly, there will be a time when its use will be advisable much earlier in the management of tubercular conditions than is now apparent.

I do not, however, advocate this in cases that are placed upon routine management and are getting along nicely. The fundamental principle of medical treatment, after all, is to get patients in sufficiently good condition to make them useful citizens in their community, and if artificial pneumothorax helps to do this, it is, of course, a very valuable advance.

Contra-indications for the use of pneumothorax, at the beginning, were many. I believe that these contra-indications are becoming less and less valid. As far as its use, in strictly unilateral cases is concerned, we must remember that tuberculosis is never, or hardly ever, a unilateral condition. There is always more or less involvement of the opposite side, usually more advanced than is indicated by physical examination, because the findings are comparative on the two sides. I feel, therefore, that the presence of a tubercular lesion in one side should not be a contra-indication for the use of artificial pneumothorax on the other side.

One should not wait for advanced tuberculosis, because this results in a mechanical contra-indication for the use of this procedure, by the development of pleuritic adhesions which, if they are sufficiently thick, cannot allow a pneumothorax to separate the leaves of the pleuræ and therefore produce a beneficial effect.

I believe, therefore, that this is a procedure so far in advance of anything heretofore devised, since the institution of the rest cure for tuberculosis, that it should be advocated by men who treat tuberculosis earlier than it

has been in the past. It should be urged more frequently, and should be given with the assurance that it will be of benefit, especially in those cases which have not gotten along well upon the usual treatment.

## ACUTE AND CHRONIC PANCREATITIS\*

H. T. BALLANTINE, M.D.  
MUSKOGEE

Now that the results achieved through the perfection in the manufacture and use of insulin has reached such a phenomenal success in the treatment of diabetes, the pancreas has inevitably come in for a large share of the discussion, that now ebbs and flows around this disease; however, the discussion, with its enthusiasms for one phase of this organ's activities or inactivities has tended to make us forget that there are other, and equally grave conditions that the pancreas may be subject to, as well as those producing a glycosuria; that snapshot diagnosis of gallstones, or left-sided renal calculi, of duodenal ulcers, of acute cardiac failure, and of many other allied conditions are in reality manifestations of disease within this organ, and the one suspected really uninvolved or only secondarily involved. My attention has recently been called to several cases where a chronic pancreatitis had existed for sometime, and had not been recognized or had been ignored.

It is my hope to recall you for a brief time to a study of acute and chronic pancreatitis, and to outline to you two or three cases of the chronic type of pancreatitis that have occurred in my own work. It has been only within the most modern time that these two conditions were recognized, except as they came to post-mortem, hence our literature is not as complete in detail nor as replete in case material as one could wish.

### Acute Hemorrhagic Pancreatitis.

A disease probably caused by the infection of the pancreas with bacteria and characterized by both diffuse and circumscribed hemorrhagic infiltration into the substance of the organ. This hemorrhage may extend into the adjacent tissues, and sometimes a localized peritonitis with fat necrosis is seen. Joachim calls this condition the most serious and fulminating of all the acute abdominal conditions and adds that only the earliest diagnosis and the promptest surgery can avail to prevent a fatal termination.

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

Until a very short time ago these two factors were not present, and many cases suffering from an acute hemorrhage of the pancreas were erroneously called something else.

#### Etiology:

Of the predisposing causes, age probably ranks first, as it is rarely seen before forty, and the majority of cases occur after fifty. Obesity, alcoholism, syphilis, and a history of gallstones, are the predisposing factors.

Of the general causes, trauma ranks first as the hemorrhage is immediate and may be severe. Obstruction to the common duct and infectious diseases, especially parotitis, are marked predisposing causes. Fornan reports a case of acute pancreatitis following a case of parotitis two weeks before. On opening the abdomen the pancreas was found swollen, acutely inflamed, with a large amount of free peritoneal fluid present. Influenza and typhoid fever in a limited number of cases have seemed to be the active causation.

#### Symptomology.

It is not always possible to separate the symptoms into definite stages; however, one can usually obtain a history of previous attacks of indigestion which may have extended over a course of considerable length, and are often so mild that the patient attached no significance to them until his attention has been drawn to them.

Attacks of jaundice may or may not have been noted, a history of some infectious disease may be given, but at times there will be no positive history to be gotten and in these cases it will be well to look to the teeth, tonsils or kidneys for the site of infection. The onset is sudden and is usually ascribed by the patient to something he has eaten. Pain is intense, yielding only slightly to opiates. This pain occurs in the epigastrium, may pass to the umbilicus but the common radiation is to the back. Following the onset of this pain is nausea with vomiting, first of the stomach contents then bile-stained mucus, and then blood coming from veins ruptured in the lining of the stomach, by the muscular contractions in vomiting.

Constipation is present and singultus may be a prominent symptom. A high temperature early is rarely seen, tho occasionally it will go to 104 degrees. This hyperpyrexia is usually seen late and is due to the onset of suppuration. Where shock is marked, the temperature is often sub-normal.

#### Physical Findings.

On inspection, the patient is seen to have markedly cyanosed lips, contrasting vividly with the extreme pallor of the face which is

pinched, drawn and shows evidence of exhaustion and anxiety. The pupils are dilated, the body covered with a profuse clammy sweat, the pulse is rapid, thready, and may be irregular. The abdomen on palpation is found distended, rigid and extremely tender. At times a tender mass may be made out, lying in the midline at the intercostal margin. The blood shows a high leucocyte count. The feces may contain free fat, which solidifies on cooling. Glycosuria, except in the chronic cases is not usually present.

It is true that the above symptoms are not pathognomonic of this disease, but given a robust person, previously healthy, who is suddenly seized with an excruciating pain in the upper abdomen, associated with nausea and vomiting and near collapse, this disease should always be suspected.

If the active stage does not end by death in from three to five days, suppuration occurs, and a true picture of sepsis is seen.

#### Diagnosis.

At times this will be extremely difficult if not impossible, but given a history of gallstones, or any other condition causing a complete or partial occlusion of the common duct with a laboratory finding of fat globules and muscle fibers in the fecal contents, a diagnosis should be comparatively easy.

There are many conditions from which this disease must be differentiated. The following are the most important.

First. Acute gastric dilatation. Here there is usually a history of recent operation or of a physical or mental shock, and the dilatation is not so sudden in onset.

Second. Gastric or duodenal perforation. Here the history of an ulcer may sometimes be obtained, or perhaps the X-ray findings of the ulcer will be of service.

Third. Cholelithiasis, gangrene of, or perforation of the gall-bladder. Here again a careful history will be of great help, and with the findings of bile pigment in the urine, tenderness in the region of the gall bladder, and the additional fact that gall bladder disturbances yield to opiates, while the pain of pancreatic hemorrhage but incompletely so, the differential diagnosis should not be difficult.

Fourth. Intestinal obstruction, when this occurs high up, the differentiation will not be easy and at times can only be made by an exploratory operation.

Fifth. Ruptured ectopic with free blood in the peritoneal sac and intestinal irritation. In these cases there is a history of a missed menstrual period, of spotting, and the pain occurs lower down in the left side.

### Complications.

These are common and consist of peritonitis, perforation into the stomach, thrombosis of the veins of the portal circulation or a left sided perirenal hemorrhage.

### Treatment.

This should be prompt surgery in all cases and where a doubt exists, an exploratory operation should be done immediately.

### Of the Protective Measures.

Morphine for the pain, atrophine and strychnine for the shock. To revive the patient and build up the system a blood transfusion may be done.

Spontaneous recovery by rupture into the intestines and drainage has been reported but these cases are entirely too rare to justify a delay when this condition is once suspected.

### Prognosis.

The outlook is always grave. Death without operative interference occurs in one week, and may occur in the first twenty-four hours, from shock. If death from shock does not occur, suppuration may set in and the patient die from true sepsis.

### Chronic Pancreatitis.

Of this disease Opie described two types, chronic interlobular pancreatitis and chronic interacinar pancreatitis. The second type is of special significance in the pathology of diabetes.

### Chronic Interlobular Pancreatitis.

A chronic inflammation of the pancreas, characterized by the formation of connective tissue bands, extending between the lobules of the pancreas.

### Pathology.

The organ is firm and slightly enlarged. The markings of the lobules stand out distinctly and the ducts are usually dilated. This type of disease is most frequently seen where some obstruction to the common duct exists. Between the lobules is a growth of connective tissue constricting the smaller ducts and predisposing to cysts of the pancreas. Since the interacinar tissue is not connected with the ducts the Islands of Langerhans are not often involved in this type of the disease. The common duct, due to its relationship to the head of the pancreas is sometimes constricted.

### Symptoms.

In the early stages these are usually masked by biliary or hepatic diseases. The onset is slow and insidious, beginning with nausea, and a disgust for foods, especially meats and fats, and as the case progresses is followed by violent attacks of vomiting. There are attacks of diarrhoea, alternating with constipation, or there may be only a general sluggishness of the bowels. Signs of achilia gastrica

may be present, with evidence of a general pancreatic deficiency. Owing to a compression of the common duct and a damming back of the bile, jaundice may be a prominent symptom. The liver and spleen are enlarged until they are palpable and glycosuria may be present. Some of the signs of Graves Disease, such as tremor or dermatographia are often seen and in exceptional cases exophthalmos may exist. The Cammidge test is always positive.

### Diagnosis.

Among the more important things from which one must distinguish this disease are pernicious anemia, chronic malaria and a severe diabetes. The blood picture will usually make the diagnosis in the first two conditions, and a careful study of both the urine and feces will clear up the third.

### Complications.

Those most common seen are acute hemorrhage of the pancreas. Cysts and fat necrosis.

### Treatment.

Prophylactically, should be the treatment of the condition predisposing to this, such as gallstones or syphilis.

Diet must be restricted, and fats and animal proteins practically eliminated. If there is a deficiency of hydrochloric acid this may be given with the meals, hoping to stimulate pancreatic secretion. If there is a scarcity of the natural pancreatic juices these may be supplemented by the administration of any of the pancreatic products on the market. I prefer the elixir put out by Armours. It is agreeable to take and has seemed to act effectively in those cases where I have used it. If jaundice is present or becomes active, surgical drainage of the gall bladder should be instituted and may relieve the entire condition. Monihan claims that a perfect result may be expected in the majority of cases.

### Prognosis.

The disease long drawn out is rarely fatal, and in the majority of cases produces symptoms of sufficient gravity referable to the gall bladder, that this is drained and the disease often relieved in this way. The presence of diabetes, if at all severe, is a vital factor in making a prognosis.

### Chronic Interacinar Pancreatitis.

This is a chronic inflammation affecting the pancreas, characterized by the formation of connective tissue which invades the space between the pancreatic cells.

### Pathology.

On examination the organ is found somewhat enlarged. The signs of lobulation are destroyed, and the gland tissue itself is exceedingly tough. Newly formed connective

tissue invades the boundaries between the cells of the acini and the Islands of Langerhans. The alveoli and the islands themselves from pressure may be absorbed so that nothing remains but a mass of connective tissue.

#### Symptoms.

These are essentially the same as those of the interlobular type. There is a more marked disturbance in the urine, jaundice is not of such frequent occurrence and the intolerance for sugar is more marked.

#### Treatment.

This should follow the lines laid out in treating the first type; however, more attention should be paid to the diet and there is a more urgent need for the pancreatic products, and there is perhaps a more marked improvement following their use.

The following cases will illustrate both types of chronic pancreatitis:

Mr. C., aged 42, accountant, first noticed digestive disturbances, such as pain after eating, eructations of gas, etc., in 1918. Was placed on a diet, and condition remained stationary until 1920, when had an acute exacerbation. On advice of his physician, had an x-ray of abdomen made and condition pronounced duodenal ulcer; treated awhile and went in November 1920 to Sipy, of Chicago, who failed to find the ulcer and pronounced his condition one of Colitis; was treated there for awhile, returned home somewhat improved but soon had a relapse. In 1921 had all his teeth extracted, diet was watched and seemed to improve for a time, but relapsed and was not under any special line of treatment until in December 1923 when patient came to me complaining of intense pain after eating, sometimes necessitating opiates, slightly jaundiced and tender over the abdomen, especially in epigastrium, urine showed a trace of sugar and feces contained fat globules and undigested muscle fibers.

#### Diagnosis Chronic Interacinar Pancreatitis.

Treatment was along the lines as given above. Today patient is much improved, not so sallow, has put on weight and generally feels well.

#### Case Two.

Mrs. D., aged 26, nervous and poorly nourished. Operated on 1916 for appendicitis. Health fair since that time until November 1922, when patient had an attack of acute indigestion. Since that time has had pain after eating, and on eating certain articles of food. Constipation and extremely sluggish liver, sallow but never jaundiced. Tenderness in epigastrium, nausea, but no vomiting, urine negative as to sugar, but feces contain-

ed free fat, and undigested muscle fibers. Diagnosis: Chronic Interlobular Pancreatitis.

#### Treatment.

Elimination of fats and proteins, ingestion of pancreatic elixir.

Condition at present improving rather rapidly.

#### Case Three.

Mrs. D., aged about 45, extremely nervous and anemic. Eight months ago began having hemorrhages from the bowel, following a history of indigestion extending over a period of several years. These hemorrhages became severe, and in January of this year the patient came under my care, complaining chiefly of nervousness, and extreme weakness. She was placed in the hospital in bed and an effort made to control the hemorrhages. The anemia, secondary in type was severe, and from the anemia mental disturbances occurred. Urine was negative, but the feces showed free fat and undigested muscle fibers.

#### Diagnosis.

Chronic Interlobular Pancreatitis, with secondary anemia from hemorrhages, caused by the erosion of peptic ulcers within the lumen of the bowel.

Patient was placed on the treatment previously outlined, and was improving when she became dissatisfied with hospital routine and returned to her home. I have since learned that she has markedly improved and is now able to be up and around.

#### Conclusions.

First, that it is the exceptional case of acute pancreatitis that will be reached in time to be saved.

Second, that a more rigid method of differential diagnosis in both acute and chronic cases should be insisted upon.

Third, that many of our unsatisfactory cases of hepatic disturbances should yield to a corrective treatment of the pancreas.

Fourth, that in both acute and chronic types, surgery offers us our best result.

Fifth, that in all non surgical cases marked benefits may be obtained from the proper dietary measures, supplemented by the ingestion of standard pancreatic products.

#### Discussion: DR. FRED S. CLINTON, TULSA.

1. Acute, agonizing pain in epigastrium which is so extreme, that collapse and even syncope may be produced.

2. Vomiting (very persistent).

3. Constipation is the rule—almost absolute.

4. Murphy said "There is no lesion so severe in onset, none that caused such intense, continuous pain or collapsed the pa-

tient so much as acute, hemorrhagic pancreatitis."

5. Deaver said "There is no sign or symptom that is pathognomonic of this disorder, but the onset is so sudden and acute that immediate operation is insisted upon without the formality of a definite preoperative diagnosis."

6. At operation the presence of a sero-sanguineous fluid in the peritoneum and the disseminated fat necrosis clinches the diagnosis. Fluid quite toxic.

7. Murphy insists on immediate operation. Also Deaver, Moynihan and W. J. Mayo.

8. If seen forty-eight hours after onset Murphy-Fowler-Ochener treatment.

9. Dr. De Quervain says the presence of fat in stools is only significant when the bile is normal.

#### *Discussions by—*

DR. ARTHUR W. WHITE, OKLAHOMA CITY.

DR. J. F. KUHN, OKLAHOMA CITY.

DR. D. D. PAULUS, OKLAHOMA CITY.

not furnished JOURNAL.

## INFLUENZA AND INSANITY\*

FELIX M. ADAMS, M.D.

VINITA

Since the epidemic of influenza of 1918 many of the cases admitted to the Eastern Oklahoma Hospital give influenza as the cause of their insanity. Reviewing these cases we find only a small percent suffering from a true influenza psychosis and in many the influenza was only the exciting cause of a mental disturbance in cases of potential insanity. We all recall in treating patients during the various epidemics the many nervous and mental symptoms presented by these patients and especially the cases of psychasthenia associated with neurasthenia and melancholia, in fact, we thought of it as part of the disease, a consequence rather than a complication. Considering the theory advanced by Kraepelin in his work on psychiatry, in which he maintains that each infectious disease is followed by a toxic or an exhaustion psychosis peculiar to that disease, as a typhoid psychosis or an influenza psychosis, we would readily expect a greater number of true influenza insanities than we have found. Also, Osler taught us that almost every form of diseases of the nervous system may follow influenza.

Sandy, in reviewing 70,000 cases in the files

of the Surgeon General's office, found only 269 cases giving influenza as the cause of their mental disturbance. After a careful consideration of these he states that only 73 of the 269 could be classified as being caused from an influenza infection. In commenting on the small number found he says that he is surprised that more cases with a possible influenza psychosis were not found among this large number gathered from all camps of the United States. He thinks mental and nervous disorders caused by influenza severe enough to require the attention of a specialist were comparatively rare. He concedes, however, that nervous and mental complications, such as a slight neurasthenia and confusions are common but they usually do not outlast the acute disease.

Fell states that out of 2500 cases of influenza treated at the Walter Reed Hospital during the epidemic of 1918, only 20 cases developed a psychosis and only four of these were of a severe type that outlasted the acute infection.

Sawyer, in reviewing 100 cases admitted to a private hospital, found that 20 had had influenza during the 1918 epidemic and associated their mental trouble with that disease.

In the records of our hospital we find many of the cases giving influenza as the cause of the mental trouble erroneous, as they have a history of previous outbreaks and this attack is more likely a continuation of the old psychosis. Also other cases that attributed their psychosis to an influenza infection that developed some months after the acute illness are in error for if the mental disturbance did not develop in thirty or forty days after the infection I believe it should not be given as the exciting cause as most of our influenza cases had either recovered in thirty days or had developed other symptoms from the toxic effects of the disease. Eliminating such cases from our records and taking the cases that developed during the acute illness or during the convalescence period we find the following classifications represented in the order named—dementia præcox, infectious psychosis, involution melancholia, psychasthenia and manic depressive psychosis.

In the dementia præcox group the onset of the mental disturbance varied from the first few days of the infection to thirty days after. In the majority of the cases we find a bad family history, the patient of the "shut-in type of personality" and with a background for the easy development of a mental disturbance, in fact, they were potential dementia præcox cases to begin with and likely would

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

have developed a psychosis from any other infectious disease or from any unusual stress or change in their environment. The majority of these cases were in a depressed mood and fears, but after a hospital residence of a few weeks these symptoms subsided and they pursued the regular course of a dementia præcox case, showing various mannerisms of speech and action, laughter and silliness, while a few showed negativistic reactions and stupor with auditory and visual hallucinations. Very few of this group showed improvement and ran the usual course. Some writers tell us that cases following influenza will show more rapid improvement but such has not been our observation.

The infectious group was second in prominence and represents the true influenza psychosis. These cases developed either during the fever or while the patient was convalescing. The family history does not play an important part in this group and most of the cases came from a clear sky. All of these cases were in poor physical condition and it was hard to distinguish between an infection or an exhaustion as the etiological factor and I think some of these cases were the results of insufficient brain nutrition as well as the action of the toxin on the central nervous system. The clinical picture met with in this group varied. Some were confused, some with severe motor excitement and incoherent talk, disorientation, bewildered expression and various hallucinations of sight and hearing. A small number developed catatonic like symptoms and stupor. Most of the patients under this group made a rapid recovery under sedative treatment and rest. I feel sure that many cases of infectious psychosis following influenza were not sent to the State Hospitals but were cared for at home or in the General Hospitals.

Of the involution melancholia group I feel as in the dementia præcox cases the influenza infection only precipitated the mental disturbance and in most of the cases they likely would have developed a psychosis without this exciting cause. These cases showed great agitation, worry, uneasiness, anxiety, various somatic delusions and insomnia and a few cases had attempted suicide before being brought to the Hospital.

The psychasthenias associated with neurasthenia were small in comparison with the other groups on account of such few of these patients having to be committed to an institution. I feel that this is the most common of the disturbances following influenza infections altho our records show only a few cases. The symptoms of this group also de-

veloped either during the fever or convalescence. These cases were usually in poor physical condition and complained of being tired and weak. The depression varied from a mild degree to an almost catatonic state. In two cases there was some doubt as to the diagnosis of psychasthenia or dementia præcox, catatonic type. They also showed obsessions, morbid doubts, insomnia, and a feeling of insufficiency. There was no amnesia or disturbance of consciousness. These cases all made good recoveries.

The manic depressive cases were few and most of these showed bad family histories. The depressions were in the majority showing a sad and hopeless mood, despondent and with a marked retardation of thought and action. Of the manic type they varied from a mild elation to the badly excited cases showing rapid flight of ideas and great motor activity. All of the cases in this group ran the usual manic depressive course and the majority recovered from the attack.

Summarizing the literature on influenza and insanity and taking the cases that we have observed in our own hospital we come to the conclusion that influenza may cause nervous and mental diseases in cases where there is no predisposition to such disorders but these cases are few and that the greatest tendency of this disease is to excite a psychosis in potential cases. Its action is more of a toxic condition than a direct action on the central nervous system.

*Discussed by—*

DR. J. J. GABLE, NORMAN.

DR. C. B. HILL, GUTHRIE.

Discussions not furnished JOURNAL

#### SOME OF THE INTERVENING DIFFICULTIES IN THE TREATMENT OF MENTAL DISEASES\*

D. W. GRIFFIN, M.D.

OKLAHOMA CENTRAL STATE HOSPITAL  
NORMAN

In preparing a paper for the Society it is perfectly natural to think of the subject nearest one's heart, and for that reason thinking you would be interested or perhaps expecting something along my special line of work, I have chosen the subject which has to do with some of the intervening difficulties in the treatment of mental cases.

The first difficulty which comes to my mind is that of fear, or the dread of someone finding out that so and so has a mental disorder. This idea of fear no doubt originated

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from the inherent fear of the disgrace which in the early history of our country was quite common.

Many of you will remember in the early history of our colonies when those suffering from mental disorders were regarded as witches. History does not record a blacker page than that of the Salem Massacre when sixteen mentally sick men and women were burned at the stake, and not only were they burned, and otherwise outraged, but those who harbored or otherwise gave succor and comfort were regarded as suspicious characters.

Along about the beginning of the 17th century, they were hired out, or sold on the block to the highest bidder, for their care and keep. When we speak of slavery we think of the block man, not many of us are reminded that at one time, and that not so long ago, our unfortunate mental cases were sold into slavery. When the states began to take notice of the problem, and for many years afterward, the treatment accorded was in many instances worse than heathen. They were jailed or tied by the legs and arms in some remote corner of an outhouse, with all its resulting horrors.

Not until about the year 1848, did the new dawn begin to break for this class of individuals. It was about this time Dorothea Dix began her crusade of reformation, and strange as it may seem, Nightingale was on the other side of the world, making demand for the sick and wounded Crimean soldiers. I say not until this time when Dorothea Dix appeared before the Massachusetts legislature and cried out "Men of Massachusetts, listen to my plea for the insane of our states! Her utterances became so powerful and convincing, so much so that her speech is recorded on the pages of history as one of the greatest declarations for humanity ever uttered before a law making body. ~

It is not to be wondered that we have this inherent fear of mental disorders. I have people come to me every day and on entering my office, and, looking around to see if the doors and windows are all closed, begin in a low shameful voice to tell me they are suspicious of the mental status of some loved one, they have never told any one; no one has suspicioned anything wrong, and on leaving implore me not to tell of their visit for fear some one will find out the truth.

Then again our legal procedure in its dealing with this whole problem is all wrong. We have in Oklahoma as good a statute covering this subject as does any other state. We have tried to make the access to one state hospital as easy as the constitution of our

country will permit. We have thrown around our mentally sick every safeguard possible, by introducing the volunteer act, but that can only affect a very few. Under our constitution, you can't restrain the liberty of any citizen without a trial by jury, though in the greatest majority of cases, a jury trial is waived, however, a court record must be made, and this is the sting. The day will come when we are sufficiently advised that we will change the part of our constitution affecting sick people.

These, and many other reasons, too numerous to mention, are why we have the great fear and dread of sending our loved ones to our state hospitals. I think we have, too, in a large measure, overcome many of these evils, though by no means all. Now right here, I know you will pardon me for making a mild attack at our profession for some lack of a better understanding. Every day I have some poor fellow coming to us, whose chances for recovery are gone because some doctor delayed too long.

Last week a man brought to me his son, who had been sick for two years, and when I asked why the delay, he stated his doctor had told him of the horrors of our hospitals, how they were mistreated, and that "those asylum doctors didn't know anything anyway."

Now I think I have a plan whereby the medical profession can help bring about a better day for our sick, and it is this: Let us go before the legislature with well worked out plan of organization, and put before the people of our state a plan of outdoor clinic. Let us say to the people, we have in three or more of our larger centers a place where they can go for council and advice; that on a stated day of the month, or week, a staff member from one of our hospitals will be present to examine and counsel with those who so desire, where the family physician can take his patient for examination, diagnosis and treatment. Also this same clinic can aid the schools in helping solve some of their more difficult problems, of which they have many, in the matter of backward and defective children. If we could have one day a week in cities like Oklahoma City, Muskogee, Tulsa, El Reno, Enid, etc., it would mean a saving of thousands to the state in taxation. Many of the borderline cases need only counsel and advice. I am besieged every day with these cases, I like to do it, and do it freely without pay when they come to my office. I know what the people need along this line and all I want from you is co-operation to put it over. I would use this same measure as an after cure treatment by inviting a visit

from discharged and paroled patients. Many, many of these cases return because we have no way of keeping up with them after leaving. It would also have another very great beneficial effect in the matter of spreading abroad the gospel truths of our hospitals and what they stand for. The people would soon find out they are something other than jails. These are the needful things and it is up to us as medical men to spread the knowledge abroad and when you do this you will not only make the burdens of our hospital management easier, but will save thousands of sufferers besides. I want to say, not to startle you, but I want you to know that the care of mentally sick and defectives of this state is becoming one of the state's greatest economic problems. Our institutions are being literally crowded with chronic cases, not all could have been saved by proper treatment at the proper time, but hundreds of these could have if they had been taken in hand at the right time and given proper care.

I hope you will pardon me for another suggestion to our profession, which idea is not altogether original, others are thinking along the same line. Now I believe it is a very generally accepted fact that our so called insane are only sick folk and as such they need to be treated in like manner as other sick folk, which leads up to this thought. It will not be but a short time until we will have in connection with all well regulated hospitals a psychopathic department, and men and women who understand and regard mental cases as a disease not perhaps, primarily of the brain, but secondarily so. In the greatest majority of mental cases the trouble is not originally of the brain and nervous system, but of other co-ordinating organs and when we reach the mastery of our profession we will accept all mental cases as sick people with an underlying etiological cause, as would be expected in any other disease. Then with all technical apparatus, just why should we make such wide distinction in our mode of handling sick people? The additional equipment necessary to carry out this plan would be very little. Many, many of these mental cases could and should be first tried out in our sick hospitals before being legally committed to our state hospitals. I don't pretend to say all cases could be handled in such manner, though with the proper equipment and the intelligent understanding some of the cases should be first tried out. They are already doing this in some of the largest and most up to date European hospitals, as well as some of our American hospitals.

The main point I want to drive home is

that when a man is mentally sick, there is an underlying cause other than being possessed of the devil. We are too ready to say, Oh! He is crazy, send him to the asylum, there let them put him in a padded cell or straight jacket. There might have been such excuse for such statements even twenty years ago, but not now. Nobody but the ignorant say such things. Those of you who have visited either of our state hospitals know the falsity of such statements, though they are made and when I hear of such it pains me to the very heart. Our state hospitals are hospitals in the truest sense and I beg of you men of my profession, get better acquainted with our hospitals, their management and what they mean to our commonwealth.

Now I have very briefly told you of some, a very few, of the difficult problems in treating mental cases and I realize it has been very inadequately dealt with, but if I have said anything that will aid you in helping us deal with the problem, I shall be happy. I cannot leave the subject of the unfortunate insane without reminding you of the two thousand year old doctrine: "For I was hungered and ye gave me meat; I was a stranger and ye took me in; naked and ye clothed me."

#### THE OKLAHOMA COUNTY MEDICAL ASSOCIATION\*

WM. H. BAILEY, M.D., PRESIDENT

Our summer vacations are over. Fall has come and we should be eager to take up our winter's work. This Association should receive a portion of our time and energy. It is larger than any other medical organization in the City and its members represent a wider range of interest. It is "up to us", to use the slang phrase, to finish up this year at even a stronger pace than we have gone up to this time. Any administration naturally is anxious to make as good a record as it possibly can. The four quarterly periods in its term of office may be compared to the four years course of a college student.

\* The Freshman is the "embryo", he attempts everything and may develop into anything. Failures have no effect upon his enthusiasm because he has an over-supply of boldness and confidence. However, it is, at times, surprising how well he succeeds.

The Sophomore is the "wise fool." The realization gradually dawns upon him that

even he cannot accomplish everything. With these disappointments his enthusiasm is likely to drop to a low ebb. If he is wise he will profit by these disappointments and be the stronger, if he is a fool he will become discouraged and quit.

The Junior is the "worker." He knows he has slowed up in his second year and labors to make up the lost time. His efforts now are not wasted on the non-essentials. He is better able to differentiate between the things that are worthwhile and those that are petty and unimportant.

The Senior is the "finished product." He is the result of the previous three years. He has in his make-up some of the bold confidence of the Freshman. This has been modified by the rude awakening of the Sophomore. He has re-adjusted himself and been polished by the hard work of the Junior. He builds for permanency of his ideas. He tries to hold secure the advances he has made. He begins to look around and to analyze his relation with those with whom he comes in contact. He sees things in a more perfect perspective. He becomes more accurate and unprejudiced in his judgment.

In our County Medical Society we have passed thru the first and second terms of this administration. The first half of our time has been completed. Our freshman and sophomore years have been finished. We were bold and ambitious in the beginning. Our committees were determined to make a record. The big plans that they made looked easy. Already we have made some changes in our committees and plans. More changes will be made in the future. We are now entering our junior year. Let us remember that the junior is the "worker." Let us show some real active enthusiasm for our society. If we carry out a progressive constructive program; if the officers and committees are active in their work for the society, the majority of the members will also be active.

If I could, I would change the by-laws. I would introduce a compulsory attendance clause. Everyone would be forced to attend at least 75 per cent of the meetings. My! What a burden that would be to some of us. You drop a member from the rolls because of non-payment of dues, why not drop him because of non-attendance? It seems to me that the one who attends the meetings regularly is more valuable than the one who pays his dues and does nothing more. It is difficult for me to believe that any man who attends his county society meetings only once or twice a year is very actively interested in its welfare.

To make another change in the by-laws, I

would arrange it so that every member could hold some important office every three or four years. There is no stimulation more productive of active interest in the society than to be elected to an office and to strive conscientiously to perform the duties of that office. If we knew that our re-election to some office in a few years depended on our activity in the society, would not that fact be the best kind of a stimulation to our efforts to do our whole part as members.

A third change that I would make is in the manner of electing the officers and appointing the committees. A nominating ballot should be taken at least one month before the election. Those nominated should appear before the society and promise that if elected they would do their utmost to fulfill the duties of the office for which they were nominated. Failure to make such a promise to the society would withdraw the candidates name from the ballot.

Then the men to be elected to office would be chosen from those most active and interested in the society. We should elect our officers because of their value to the society. If they fail in the duties of their offices, I do not mean, if they make mistakes, but if they fail because of lack of effort and interest, then they should be removed and their successors elected. There is nothing that will kill a society quicker than to have a staff of officers and committees that have no initiative or "pep."

When our senior year is finished, when we have graduated, then is when we should be of most value to the society. It should be the Commencement for our most valuable work in the society. We will have had the best kind of training that the society could give. We will owe an obligation to the society which should be repaid. We must not think that because the society has given us certain honors that there is nothing left for us to do. We must continue active in the society or we will be unworthy of the trust that was given us.

This is my wish for this society for the remainder of the year. 1. That all of us, officers, committeemen and members will take an earnest interest in the society and give its activities some time and thought. 2. That all of us will attend at least 75 per cent of the meetings for the remainder of the year. 3. That the officers and committeemen to be elected or appointed for next year will be chosen from among those who have shown by their attendance and work this year that they are really interested in the society's welfare.

SOUTHERN MEDICAL ASSOCIATION  
MEETING AT NEW ORLEANS,  
NOVEMBER 24-27

The Orleans Parish Medical Society of the "City of Hospitality," New Orleans, is host this year to the Southern Medical Association.

New Orleans is one of America's most fascinating cities. It has much to interest and charm. If the reader has followed the "Sandy Sees New Orleans" stories in the SOUTHERN MEDICAL JOURNAL, he has had a few side-lights of this wonderful city. In whatever one may be interested—be it romance, education, commerce or pleasure, one will find in that great city something to gratify that interest.

#### THE DATE

It was necessary this year to place the meeting later than usual,—the fourth week in November, which is Thanksgiving week. A condition involving the hotels made it impossible to meet earlier in November, a circumstance over which our host had no control and one it tried faithfully to remedy. It was suggested that the Association might meet this year during the latter part of October or around the first of December. But there were many reasons why this was impossible. Notwithstanding the fact that some might think Thanksgiving week not a desirable time for a medical meeting, the Council, after careful consideration of the whole matter, decided it was a more suitable time than October or December, and set the date for November 24-27. Many think it a very wise choice, for medical work is usually slack during the Thanksgiving holidays, which makes it a good time to take a few days off from practice.

Perhaps one may like a horse race on Thanksgiving afternoon. New Orleans has it. Thanksgiving turkey at one of New Orleans' famous eating places will be an event long to be remembered. By all means the wife should be there, too.

#### SCIENTIFIC WORK

The scientific work will follow the plan of the last meeting, all sections meeting in half-day sessions to avoid any more conflicts than possible. The program this year will be made up of some twenty sections and conjoint meetings in which practically every branch of medicine and surgery will be covered. From the preliminary programs already in hand, it is safe to say that as far as the scientific work is concerned the meeting will be up to the standard of previous meetings; and the pro-

grams alone will be well worth the trip to New Orleans.

#### CLINICS

On Friday and Saturday following the meeting for the benefit of the many who will wish to stay over, there will be a clinic program. The local profession will be unsparing in making this feature an event of supreme interest. Clinics will be held at Charity Hospital, Touro Infirmary, Hotel Dieu, Presbyterian Hospital, Mercy Hospital, Saint Rita Infirmary, Dispensary for Women and Children, and the Eye, Ear, Nose and Throat Hospital.

Several of the sections will have section clinics as part of their regular program. The Eye, Ear, Nose and Throat Club, as a part of the official program, will present clinics on Tuesday and Wednesday afternoons at Touro Infirmary and the Senses Hospital.

New Orleans, with its great medical school, its noted scientific workers and its splendid hospitals, will be able to present an interesting clinic program, which will lend a medical atmosphere to the whole meeting which has not been possible at all previous gatherings.

#### ENTERTAINMENTS

The usual President's Reception on Tuesday evening will be an unusual event this year and will be held at the Atheneum, where all of the large carnival events are staged. The reception will be followed by a grand ball, and a grand ball in New Orleans is truly a grand ball.

For the visiting ladies, the wives and daughters of the physicians, there will be a trip through the historic Vieux Carre on Tuesday with a lecturer in attendance. Following this tour of "Old New Orleans" there will be a luncheon at the Country Club. On Wednesday the ladies will have a boat trip on the "Father of Waters," thus affording them the opportunity of viewing one of the great world harbors with its fleet of water craft.

New Orleans is noted for its hospitality and those who attend may be assured that the entertainment will be true to the traditions of the city. Besides which there will be alumni reunions; recreation is provided for, including golf; the scientific exhibits this year promise to be even better than some of these at previous meetings. Hotel accommodations are of the best, and it is only requested that reservations be made in advance to properly take care of all who expect to attend. Railroad rates have been reduced for all visitors and members.

# THE JOURNAL

OF THE

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### EDITORIAL

#### HOW DR. MORRIS FISHBEIN SOLD SCIENTIFIC MEDICINE TO OKLAHOMA

To say that the recent lecture of our distinguished visitor, Dr. Morris Fishbein, met with a hearty reception from our profession and the general public in Oklahoma is describing an epoch in modest terms. Dr. Fishbein showed clever ability to present scientific medicine in such a manner as to make it clearly understood by the public. His physical endurance was remarkable, as also was his unlimited knowledge of medical history and recent advances of the science of medicine.

Within the four days he spent in our state he delivered twelve addresses, each of them was from one-half to one and one-half hours in length. A remarkable thing about him was that he repeated scarcely any, and when he did, only in a few of the essential scientific facts which were given in his principle address, "The Progress of Medical Science."

More than three thousand people heard him, about one-fourth of whom were members of the medical profession. No speaker representing medicine or public health has ever received in Oklahoma, such complimentary comment from the press or has been quoted so freely.

Announcements had previously been made from public platforms and through local papers in each city where the Doctor spoke. A committee of one or more physicians in each city waited to greet us on our arrival.

The first address Dr. Fishbein made on his tour exemplifies his versatility and easy adjustability to conditions as he meets them. The Scottish Rite degree ceremonial was in full swing when he arrived in McAlester. Even with every hour of their time filled to overflowing, those in charge agreed to let the Doctor appear before their body, providing he addressed them along the lines of modern hospitalization, in which subject they are particularly interested at this time because they are planning soon to build a hospital of their own. For half an hour he held this group of earnest men tense, as he opened their minds to the benefits of a modern hospital. He wove into his address upon this subject, so adroitly and pleasingly, the main theme of his regular lecture that none who heard him realized it.

His visit of only two hours in Durant was partially spent in social discussion of medical problems with individual physicians, after which he addressed a small group of faithful physicians upon the benefits of organization and the services being rendered by the American Medical Association.

Our late train was greeted at Ardmore by an enthusiastic group of progressives, whose cordiality so touched Dr. Fishbein that one of our party remarked, "This greeting is more to be appreciated than that of a brass band." A good sized audience in the civic auditorium listened for more than one hour to his masterful discussion of the rise and progress of medicine.

In Oklahoma City, due to the many conflicting attractions that are always difficult to meet, we approached the day of his lecture with apprehension, fearful that attendance at his meetings would be small. We were pleasantly surprised. His address at the

Co-operative Club, whose attendance was augmented by a large number of visitors who had been invited to hear him, was quite well received. At the special banquet for press men and physicians he had an excellent audience, with the press well represented. His final appearance at the Masonic Temple where he addressed the public at large, brought out a representative gathering.

The cordial spirit which he established with the members of the press while banqueting with them in Oklahoma City unquestionably will be the source of great benefit to the whole state of Oklahoma in the future. His wit and clever references to newspaper clippings he had observed in which the newspaper men have attempted to describe some phase or discovery of medicine without the friendly co-operation of the medical fraternity, kept the meeting in a joyous uproar.

He offered the valuable suggestion that each County Medical Society appoint a press committee whose duty it shall be to co-operate and aid the newspapers in giving correct and clean information upon medical matters and developments.

At Chickasha the Doctor filled the heaviest local program of his tour. It unquestionably will prove to be most productive of good. Local physicians had scheduled him not only for an address at the Rotary Luncheon but also before a body of six hundred young ladies in the Oklahoma College for Women, and another address to about eight hundred peppy high school students. These three lectures, each different though woven around the science of medicine as related to good health, were given by Dr. Fishbein within a period of two hours without the least evidence of fatigue.

At Enid good publicity having been given to his lecture, a large audience greeted us at the First Christian Church, notwithstanding that their own talented young Prima Donna, who had just returned from European tour, was giving a recital in an auditorium nearby.

It remained for Tulsa, however, to provide the climax in many respects to the entire trip. A nicely prepared luncheon at a private club awaited our arrival at the noon hour. This luncheon was attended by eighteen or twenty members of the local profession. A most profitable round table discussion of the recent events and discoveries in medicine resulted.

Tulsa had thoroughly advertised the lectures and had secured the co-operation of the public. The banquet was well attended. Dr. Fishbein in his address upon, "Mirrors of Medicine," cleverly described the overzealous ego of the various specialists in medicine,

causing everyone to laugh and applaud almost to exhaustion. In his public address, later, he was introduced by Superintendent of Schools, Dr. P. P. Claxton, and the audience which almost filled the lower floor of the High School auditorium was largely composed of teachers and substantial townspeople. These listened with a keen interest to what he said about the history and the present status of the many scientific discoveries in medicine and what they had meant to the world.

Summarizing, I am sure I express the opinion of all the profession who heard him, that perhaps no other medical lecturer in the United States could have so successfully planted the seeds from which will grow scientific medicine in Oklahoma.

Dr. Fishbein has shown the way. Upon the medical profession in our State, upon us, rests the responsibility of vitalizing the suggestions he has made. Ours is the privilege of uniting the profession in an effort to educate the public to the true meaning of medicine.

Everett S. Lain.

#### *Editorial Notes—Personal and General*

DR. LAWSON HUGHES, Collinsville, has removed to Tonkawa.

DR. J. F. LESLIE, Bernice, has removed from there and located at Springfield, Mo.

DR. BENJAMIN DAVIS, Cushing, was a visitor at the Fall Clinics at Kansas City.

WASHITA COUNTY MEDICAL SOCIETY met recently at Cordell with a good program.

DR. R. L. GEE, Hugo, suffered the loss of his house by fire last month, but was covered by insurance.

DR. E. F. MILLIGAN, Geary, has returned there, after practicing a short time at Oklahoma City.

DR. F. A. HUDSON, Enid, recently spent a two weeks' vacation on a hunting trip in New Mexico.

DR. and MRS. L. L. WADE, Ryan, are the proud possessors of a new baby boy, who arrived October 1st.

DR. E. C. BRIGHT, Picher, was recently elected county commander of the American Legion for Ottawa County.

DR. H. C. MANNING, Cushing, spent several days at Chicago recently, taking some special work in surgery.

DR. and MRS. RAY LORMER HALL, Wewoka, returned recently from a visit to Missouri, and Omaha, Nebraska.

DR. I. V. HARDY, Medford, and DR. J. R. SWANK, Enid, recently returned from a three weeks' visit to the Mayo Clinic.

DR. S. GROVER BURNETT, Kansas City, Mo., has removed his offices to 308 Minor Bldg., 309 East 10th St., Kansas City.

CUSHING MEDICAL SOCIETY held its first weekly meeting of the Fall Series at the office of Dr. W. N. Davidson, last week.

DR. J. HUTCHINGS WHITE, Muskogee, returned recently from an extended tour of the north, visiting Rochester and Chicago.

DR. GEORGE H. PHILLIPS, Mt. Pleasant, Mich., has returned to Oklahoma, and is practicing at the Indian Agency at Mountain View.

DR. and MRS. EDWARD DeMEGLIO, and family, Oklahoma City, returned last month from a four week's trip to Honolulu, Japan and China.

DR. W. P. ROBINSON, Sapulpa, was recently fortunate enough to recover a Ford coupe which had been stolen from him about ten days previously.

CREEK COUNTY MEDICAL SOCIETY held its semi-monthly meeting recently at the offices of Dr. A. E. Martin; the meeting was followed by a chicken dinner.

DR. C. A. REESE, Okmulgee, has located there at 220 P. O. Bldg., and is specializing in pediatrics. Dr. Reese is a graduate of Harvard Medical School, 1906.

DR. M. B. GLISMAN, Okmulgee, has returned there with his family, after several months practice at Arkansas City, Kans., and resumed practice at 400 East 7th St.

DR. BASIL A. HAYES, Oklahoma City, was married September 27, 1924, to Miss Lois Weeks, at the home of the bride's parents, Mr. and Mrs. J. W. Weeks, Oklahoma City.

CHOCTAW COUNTY MEDICAL SOCIETY had an interesting meeting and smoker at Hugo, October 28th, the subject of medical legislation receiving much attention. The next meeting will be held at Soper, Wednesday December 3rd.

McINTOSH COUNTY MEDICAL SOCIETY met October 7 at Eufaula with the following program: "Cancer" Dr. J. H. McColloch; a paper by Dr. G. W. West; and a clinic, with report of cases.

WOODS COUNTY MEDICAL SOCIETY met at Waynoka September 30, with a good program, followed by a banquet at the Harvey House. The next meeting of the Society will be held at Alva on November 25th.

TULSA COUNTY MEDICAL SOCIETY met October 27th with the following program: "Development and Progress of Endocrine Study," by Dr. C. J. Fishman, Oklahoma City, and "Endocrines" by Dr. C. T. Hendershot, Tulsa.

DR. P. FLINN, of the U. S. Bureau of Mines, Miami, is establishing a clinic at Picher, equipped with x-ray, and other modern appliances, for the benefit of all persons identified with the mining industry, service being extended to all in the

Tri-State district. The purpose of the clinic is to indicate conditions requiring corrective measures, allowing those concerned to employ the physician of their choice.

DR. and MRS. W. C. BRADFORD, Shawnee, celebrated their silver wedding anniversary on October 4th, at his mother's home, Mrs. C. B. Bradford, at Oklahoma City. Many friends and relatives were present and presented the couple with a handsome silver service.

CUSHING MUNICIPAL HOSPITAL is being dressed up at last. The city has started the work of beautifying the grounds, with trees, sod, and various plants. The institution, as an open hospital, is progressing nicely on its second year.

STEPHENS COUNTY MEDICAL SOCIETY met October 7, at Duncan, and had an interesting program: "Sympathetic Ophthalmia" by Dr. A. M. McMahan, Duncan; "Some Achievements of Preventive Medicine" by Dr. J. W. Nieweg, Duncan, followed by a free discussion of both papers.

TULSA COUNTY MEDICAL SOCIETY met October 13th, at the Municipal Auditorium with the following program: "The Burden of Civilization" by Dr. F. M. Adams, Superintendent of the Eastern Oklahoma Hospital, Enid, with discussion by Dr. Karl Menninger, Topeka, Kans., and Dr. C. T. Hendershot, and "The Medical Aspects of Personality Defects and Behaviour Disorders" by Dr. Karl Menninger, with discussion by Dr. F. M. Adams, Dr. J. E. Dwyer and Dr. W. J. Bryan, Jr.

DR. L. A. TURLEY, Assistant Dean of the School of Medicine at Norman, will hereafter require applicants to have grades averaging B-minus on a bachelor's degree as an entrance requirement, the reason being that the list of applicants to the school always soars far above the number that can be accommodated. The number of applicants this year totaled 250; only 36 students could really be accommodated, but 50 were admitted, those being state residents and some with special qualifications. This condition will be remedied when the new medical building will be ready for occupancy.

VETERAN'S HOSPITAL STAFF and physicians of Muskogee and adjacent counties are being treated to an unusually interesting and instructive series of papers and demonstrations on various surgical phases, which have been inaugurated by Colonel Hugh Scott, Officer in Charge of the hospital. The first of the papers was on "Plastic Surgery," illustrated with lantern slides, and delivered by Dr. Curt von Wedel, Oklahoma City. The second by Dr. James C. Braswell, Tulsa on "Sinus Infections." The third by Dr. Horace Reed, Oklahoma City, on the use of abdominal supports in visceroposis and allied conditions. The fourth by Dr. E. S. Lain, Oklahoma City on certain dermatological subjects, with special reference to differential diagnosis and treatment. This was also illustrated with lantern slides. Each of these offerings was far above the ordinary and was attentively noted by those fortunate enough to be present. The authors received unusual commendatory acknowledgement for their efforts.

The November series will be concluded in November and December by offerings from Drs. C. J. Fishman, Oklahoma City, Nov. 3, on "Progress of Endocrinology"; Earl McBride, Oklahoma City, November 10 on "Orthopaedic Surgery"; John E. Heatley, Oklahoma City on "X-Ray and Radiology" Le Roy Long, Oklahoma City, in December.

### DOCTOR WILLIAM J. BRINKS

While being made ready to remove him to Frederick for treatment for a ruptured gall bladder, Dr. W. J. Brinks, Manitou, passed away at his home there, October 7, 1924. Dr. Brinks was born in 1860, and was a graduate of the National University of Arts and Sciences, Medical Department, St. Louis, in 1894. He was licensed to practice before statehood, and specialized in pediatrics.

Dr. Brinks is survived by his wife; he was well liked in his community for his high character. Funeral was attended by relatives from Georgia and Mississippi. Dr. Brinks came to Oklahoma in the early history of the country from Missouri, and was a member of the A. M. A., and of his state and county societies.

### LAUREN HAYNES BUXTON

M. D., LL. D., F. A. C. S.

Again we are called upon to pay a last tribute to one of the outstanding members of the Medical profession of Oklahoma City, Dr. L. Haynes Buxton, who died at Long Beach, California, October 4, 1924, interment of the remains being made at Oklahoma City, October 8th.

Dr. L. Haynes Buxton was born in Vermont sixty-five years ago. He received his education in the East and came to Iowa to begin his professional career. After a number of years in general practise, he studied the Eye, Ear, Nose and Throat, at various graduate schools in Chicago and New York, and some thirty years ago, with his family, moved to Guthrie, Oklahoma, where he entered upon this special practice of medicine and surgery.

Governor Barnes appointed him territorial Superintendent of Health and Secretary of the Medical Examining Board, which positions he held for a number of years, with credit to himself and at the same time did much to raise the medical standards and modernize the territorial health laws.

Twenty-five years ago, being convinced that Oklahoma City was destined to become the metropolis of Oklahoma, he transferred his home and opened his offices in that city. With the establishment of the Epworth University School of Medicine in 1904 he was chosen one of the members of the faculty and later became President of the School. He did much to help make this a creditable institution, and when in 1910 it was merged with the University of Oklahoma, Dr. Buxton became a professor and later Head of the Department of Rhinology and Oto-laryngology, which position he held until three years ago, when he retired because of failing health.

Dr. Buxton was a true patriot. He could rise to great heights when the occasion demanded an appeal for real service to his country. During the world war, while much to his regret, age and the condition of his health, would not permit him to enter active service in the army, he headed several State organizations and did probably more

than any other one man to place the army medical service for Oklahoma at one hundred per cent efficiency. He had no sympathy for the "slacker" and not a few such were forced into an able and often creditable service by his untiring energy and persistent loyalty.

Dr. Buxton was secretary of the medical section of the council of national defense in 1918. In 1911 and 1912 he was secretary-treasurer of the Sons of the American Revolution.

Dr. Buxton was very active in the Baptist Church where for years he was a deacon and Superintendent of the Sunday School. In recognition of his work, a few years ago, one of the leading Universities conferred upon him the degree of Doctor of Laws (LL. D.).

The possessor of a naturally brilliant mind, he read widely and was the owner of one of the largest private general libraries in the State. He wrote much upon medical subjects and his works were always well written, clear in their conception, positive in their declarations, and therefore received with much acceptance by the profession generally.

Dr. Buxton's family consisted of a wife, six children and a number of grand children, all of whom survive him. As a husband and father his devotion was deep and sincere. He merits and maintains their abiding love and reverence.

What greater tribute can be paid to any man at the close of life, than to be able to state honestly, that during his life-time, he was a devoted and loyal husband and father, he was a noble and patriotic citizen, and he was a faithful and constant servant to his God.—H. C. T.

RESOLUTIONS on the death of Dr. L. Haynes Buxton by the Faculty of the University of Oklahoma School of Medicine:

WHEREAS as all-wise Providence has seen fit to call our confrere, Dr. L. Haynes Buxton, into another sphere of activity and usefulness, we, the Faculty of the School of Medicine, of which he was an honored member, offer these resolutions:

1. That in the death of Dr. Buxton, the school has lost one of its ablest teachers and the Faculty has lost a personal friend who always exhibited the highest type of loyalty to it and the school.

2. That the community has lost one of its most valued members and a sterling Christian gentleman.

3. That his simple, Christian life, lived amongst us from day to day, is well worthy of our emulation and will always stand in this community as an example of right living.

4. That we extend to the bereaved family our sincerest sympathy in the irreparable loss they have sustained in the death of an ideal husband and father.

5. That a copy of these resolutions be sent to the bereaved family, spread upon the minutes of the Faculty of the School of Medicine and to the Medical Press.

Dr. A. L. Blesh.

Dr. E. S. Ferguson.

Dr. J. A. Hatchett.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
276 Mayo Bldg., Tulsa

**MALIGNANCIES OF THE ORAL CAVITY.**—Pet-  
tit, J. A.: *Northwest Med.* 1924, xxiii, 153.

In cases of malignant tumor in and about the oral cavity there is almost invariably a history of chronic irritation preceding the development of the neoplasm.

A greater number of slowly growing or relatively benign malignant tumors occur in the oral cavity than in any other part of the body.

In malignancy of the oral cavity, metastasis beyond the cervical lymph collar is rare. Not more than 10 per cent of persons who die of cancer of the oral cavity present other lesions than those which develop by continuity of tissue and cervical malignant lymphadenoma.

The percentage of cure is higher for cancer of the lip than for cancer in any other location.

In a series of 3,889 cases of cancer of the lips and cheek, Brewer found that cancer of the lower lip occurs twelve times as frequently as cancer of the upper lip.

In cancer of the lip, tongue or floor of the mouth the cervical lymphatic glands are involved early, whereas in cancer of the mucous membranes of the cheek or gum they usually do not become involved until later.

**TONSILLAR FOCAL INFECTIONS; A NEW  
DIAGNOSTIC POINT.**—Lott, H. H. Surg., Clin.  
N. Am., 1924, iv, 66.

The author has found that in such conditions as arthritis and neuritis tonsillectomy gives good results when the infecting organisms are streptococci, but that when the tonsillar focus shows chiefly staphylococcus and pyogenic organisms other than streptococci a cure is not obtained.

The new diagnostic point to which Lott calls attention is the appearance of the inflammatory zone on the anterior pillar in front of the tonsil. In streptococci infections the anterior pillars show a narrow, sharply limited, and very dark red zone, while in infections in which streptococci do not predominate there is a broader and paler red zone which fades off gradually into the velar mucosa without any perceptibly defined border.

**THE TREATMENT OF DEAFNESS.**—Kerrison,  
P. D., *Med. J. & Rec.*, 1924, cxix, 433.

The author believes that whatever increases the general vitality tends to improve audition, and whatever gain in hearing accrues from such means must be attributed to better function of the nerve rather than improvement in sound transmission.

In the treatment of deafness all sources of infection, nerve depression, or injury should be removed.

In Kerrison's opinion routine catheter inflation is dangerous to hearing as it may cause pathological changes in the membrana tensa. Routine or too frequent use of bougies or sounds is also not without risk as it may result in subacute reactions in the tubal mucosa.

In the treatment of advanced deafness it is necessary to bear in mind that the acoustic nerve is involved as well as the conducting mechanism.

In selected cases the acoustic nerve may be treated by stimulation, the administration of drugs, the elimination of injurious agencies and regulation of the patient's mode of life. In attempts to treat affections of the acoustic nerve care must be taken to avoid injuring the conducting mechanism.

**THE EARLY TREATMENT OF INJURIES TO  
THE EYEBALL.**—Coppes, L. A.: *J. Lancet*, 1924,  
xliv, 270.

Proper treatment of wounds of the eyeball is extremely important in the prevention of permanent disability and the promotion of rapid healing. Therefore all injured eyes should be treated by specialists. Since this is not always possible, all practitioners should know something of the treatment of eye injuries.

A great deal of damage may result from the careless or improper removal of foreign bodies from the cornea. To guard against infection and resulting corneal ulcer the following measures are to be recommended.

1. Anaesthesia. Drugs which do not soften the cornea are preferable to cocaine.

2. Asepsis.

3. Antisepsis. Careful removal of all foreign substances and all burned or devitalized tissue followed by the instillation of an antiseptic.

4. Bandaging. A bandage is essential if the epithelium is injured.

5. Observation. Observation should be continued until the healing is complete. The cornea should be carefully examined with the aid of fluorescein.

In cases of chemical burns the irritating agent should be removed at once by thorough irrigation with a neutralizing agent or solution. In all burns pain may be alleviated by instilling 1 per cent holocaine in liquid albolene. The oil acts as a lubricant, preventing irritation of the cornea by the roughened tarsal conjunctiva.

Severe injuries are classed into two large groups, viz., those in which the eyeball is not ruptured and those with rupture or penetration. These cases should be seen early by the ophthalmic surgeon, as great damage may be done by rough handling, improper dressing or physical exercise. The eyeball must be handled carefully and the eye placed at rest, preferably keeping the patient in bed.

**OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

**A STUDY OF ECZEMA AS AN ALLERGIC  
PHENOMENON.**—Warren T. Vaughn, M.D.  
*Southern Medical Journal*, Oct. 1924.

The writer concludes that, although, just as in asthma and hay fever, not all cases of eczema respond to specific therapy, the proportion is sufficiently high to warrant classing it as an allergic disease.

He employs the scratch method of sensitization tests similar to that employed in bronchial asthma. It is pointed out that various observers have noted a delayed reaction, appearing after 24 to 48 hours and consisting, not of an urticarial wheal, but of an indurated papule with an erythematous margin. This is regarded as a reaction of considerable importance in eczema,

where it may appear either alone or associated with an immediate reaction. So frequently does this appear that the writer customarily makes three readings—one after one half hour, the second after four to six hours and the third after 24 hours. In his experience with eczema cases, even the immediate half hour reaction tends to be milder and partakes more of the general character of the delayed reactions. The typical urticarial wheal is observed in a relatively small proportion, being usually replaced by a turgescent papule surrounded by an erythematous zone of varying degree. It is often difficult to differentiate this from the so-called pseudo reaction.

These mild immediate and typical delayed reactions, occurring so frequently in chronic forms of eczema are explained by the fact that these individuals are sensitive to proteins with which they come in frequent, often daily, contact. Such foods as wheat, egg, lactalbumen, corn, chicken, barley, casein, lima bean, potato, whole cows milk, beans, beef, rye, oats being found responsible by different observers. The frequent contact produces a state of chronic intoxication, similar to what is produced in treating hay fever patients with the specific allergens. This greatly reduces the cutaneous reaction without rendering it entirely negative. During the intervals when the patient is free from eczema the writer looks upon him as being in what may be termed a "balanced allergen state." He is sensitive but by some mechanism, at present unknown, he is able to maintain a normal equilibrium. Any one of a number of non-specific factors may act to overthrow the balance of this mechanism. Constipation, gastro-intestinal upsets, marasmus, etc., favoring the passage of undigested proteins into the circulation may bring on an attack. Such interpretation explains the good results of non-specific treatment and reconciles these results with the conception of eczema as a specific allergic disease.

**THE PROGNOSIS OF SEQUELAE OF EPIDEMIC ENCEPHALITIS IN CHILDREN.**—Roger L. Kennedy, M.D., *Amer. Journal of Diseases of Children*, August, 1924.

Sixty-one cases of residual epidemic encephalitis in children under 14 years of age were studied. Fifty-one of these were traced from the time of their first visit to the present. The duration of the sequelae varies from one to five years.

The respiratory syndrome was seen in twenty cases. During or some time after the acute illness the patient begins to breathe abnormally. Usually the respirations consist of a spell of hyperpnoea lasting for a few seconds to a minute, followed by a period of apnoea or breath holding. The breathing is usually quite noisy and of a puffing character, audible at a great distance. Various forms of hyperactivity are usually displayed during the spells. This condition does not appear to be so hopeless as some of the other sequelae, as there is no apparent deteriorating effect. Between spells, these children appear normal, providing they have no other sequelae. Having reached a certain point of severity this syndrome tends to remain stationary or improve.

Twenty-one cases showed the Parkinsonian syndrome. It begins more or less insidiously, with tremor, awkwardness, mask-like expression and progresses till fully developed. The outlook is bad. Out of sixteen of these cases that were traced only two are now able to take part in school work; and they must be transported to and from

school.

Disturbances of sleep and nocturnal hyperkinesis existed in 19 cases. The hours of sleep are often completely reversed—the child sleeping during the day and being very active and wide awake at night. There may be a decrease of the total sleeping time. Patients of this class, without other syndromes, have a more favorable prognosis than any of the others. Only three of the group of nineteen cases have failed to improve. Nine of the others are now sleeping normally, or nearly so.

As to changes in personality and behavior—most patients show some effect of the illness for a long time. This may be only a slightly altered mannerism or amount to a complete change, mentally and physically. The variety or manifestations is without limit. There is no evidence to show that a considerable proportion of such patients are mentally retarded or deficient. Of 23 such children 3 had no other sequelae. Two of these were apparently normal mentally but their antisocial tendencies were such that they had to be sent to state reform schools. A third is in a school for feeble minded. The mentality of the other 20 children, with 6 exceptions, is so impaired by this or other sequelae, that they have made little progress. The six exceptions are making fair progress.

Other sequelae than these were seen—such as mental deficiency, idiocy, deaf-mutism, blindness, hemiplegia, epilepsy, etc. As very few children suffer from a single sequel, it is difficult to draw conclusions as to which sequelae may be responsible for certain manifestations.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

**DIAGNOSTIC ERRORS.**—Dr. C. W. Bowden, Louisville, Ky., *Southern Medical Journal*, Vol. XVII, No. 9, September 1924.

The author states that not only highly technical diagnostic procedures, but often the simplest ones act as two-edged swords, giving inestimable value when properly performed, but accentuating false impressions if wrongly interpreted in the minds of careless physicians. He says that many useless surgical operations are the result of poorly made or improperly interpreted X-ray examinations. The same is equally true of various laboratory procedures. He wishes for some compulsory standards to be required of laboratory and x-ray workers. He emphasizes the fact that modern diagnostic methods are of more value in proving the absence of disease than its presence. Experience has taught him that in the cases of vague symptoms, referred to the gastro-intestinal tract, no investigation is complete without a blood Wassermann. If that is negative a spinal fluid Wassermann should be taken in a certain class of cases. He sums up as the chief causes of diagnostic errors the following:

1. The rather common idea put into practice that "If I had to be guided by one or the other alone, I would prefer the information obtained from a good history to that obtained from any other examination."

2. The lessened dangers of modern surgery.

3. Failure to properly evaluate symptoms depending upon the nervous system for their origin

(including particularly the working of the sympathetic and extended vagus system and the role of spasticity.)"

#### Conclusions.

The internist must avail himself of the aid that can be given him by the intelligent use of the X-Ray and laboratory examinations.

The surgeon must have definite evidence of the presence of organic pathology before he operates.

The diagnostician must learn to realize the importance of functional disorders thru a clearer individual study of neurology and psychology.

#### OBSERVATIONS ON THE WASSERMANN TEST.—Dr. H. M. Smith, Columbia, S. C., Southern Med. Journal, Vol. XVII, No. 9, September 1924.

The author discusses the importance of using the Wassermann routinely in all complete physical examinations. He emphasized the importance of the spinal fluid Wassermann. He outlines a standard or index of cure of syphilis before marriage is permissible. He points out the importance of an intelligent understanding of the limitation of the Wassermann test. He enumerates the following as causing false or misleading reactions.

1. Ingestion of alcohol, whether as a beverage or as an alcoholized medicine, within twenty-four hours of blood withdrawal often causes a false negative reaction.

2. Blood taken during ether or chloroform anesthesia or shortly after may show a false positive reaction.

3. Bacterial contamination of the blood specimen may change a positive to negative and from negative to positive.

4. In cases of known syphilis sudden changes in reaction from positive to negative and from negative to positive occur without any relation whatever to treatment.

5. Yaws and tuberculous leprosy may give a false positive, but for practical purposes in this country these two diseases can be generally disregarded.

6. With a positive Wassermann test reliably performed and with the proper precautions taken, there is little likelihood of going astray in the diagnosis of syphilis, but with a negative reaction the physician has to be particularly and constantly alert. The following types of syphilis may give a negative reaction:

- (a) Primary syphilis, usually during the first two weeks.

- (b) Some cases of secondary syphilis.

- (c) Congenital syphilis in children, often in the first four or five months.

7. Some Wassermann specimens contain certain anticomplementary substances that vitiate the results of the test. This occurs usually from contamination or hemolysis of specimens, due to lack of proper precaution. However, with all precautions observed, diabetic and other chylous blood, sera of new-born infants, and sera of certain cases under anti-syphilitic treatment are often anticomplementary and cannot be satisfactorily tested.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

#### 1. Congenital Abnormalities.

##### CONGENITAL ELEVATION OF THE SCAPULA.

—Delchef. *Revue d'orthopedie*, Nov. 1923, page 623.

The normal limit of the superior border of the scapula is at the level of the first intercostal space, and the inferior angle reaches the eighth rib. Any elevation about these limits may be congenital or acquired. This paper deals only with the congenital form, often called Sprengel's deformity. Sprengel's description was published in 1891 (*Revue d'orthopedie*, 1891, page 476), but it was not the first work on the subject, papers having been written by Willett and Walsham in 1880 and Eulenberg in 1862. Rager (1901) claimed that the condition is not a true elevation, but rather an incomplete descent of the scapula. In 1922, Muller classified the different forms, according to cause: congenital scoliotic, paralytic, and due to torticollis.

The dimensions of the scapula are usually reduced, either in a symmetrical or asymmetrical manner. Rarely the bone maintains its normal size and shape. Its form usually seems to be a reversion to the embryonic shape. There is often a scaphoid or concave swing of the spinal border and a forward bend to the superior angle. In position, the bone is rotated outward so that the spinal border is no longer approximately parallel with the mid-spinal line, but makes a more or less wide angle with this line open above. There may be an elevation of 11 cm. A scoliosis of the cervical or upper dorsal spine sometimes accompanies the elevation. Other malformations which may accompany the condition are spina bifida (frequent), supernumerary or cuneiform vertebrae, ankylosis of two or three vertebrae, absence of first or first two ribs, cervical ribs. There is in about 10 per cent of the cases a union of the scapula with a spinous process, usually the seventh cervical. The point of union, fibrous or bony, on the scapula is usually at the upper angle or upper end of the spinal border.

More or less atrophy of the neighboring muscles is usually present. The trapezius, subscapular, rhomboid, deltoid and pectoralis major are most often affected. The sterno-mastoid may be shortened, causing torticollis. Various other deformities have been noted in connection, notably, club feet, congenital dislocations, cleft palate, and facial asymmetry.

It is very rare that an infant is brought to the surgeon for this condition, because the deformity is seldom recognized in infancy. Patients sometimes do not come for treatment until ten to thirteen years of age. On first inspection the child may give the impression of a scoliosis, or torticollis, or cervical Pott's disease, but on close examination from behind the characteristic upward displacement and outward rotation of the scapula is noted. From the front, the superior-internal angle of the scapula is noted. From the front, the superior-internal angle of the scapula is seen projecting above the clavicle, sometimes so prominent that it may look like an exostosis. The affected shoulder sets farther forward than the other shoulder, and the summit of the acromion may be as high as the level of the chin.

The elevated scapula is movable passively and actively in every direction except downward, unless there is union with the thorax. The movements of the arm in relation to the scapula are normal, but the movement in relation to the thorax are limited in proportion to the degree of fixation of the scapula. Abduction is particularly limited, and it is this symptom which usually brings the patient to the surgeon. The affected side is not as strong as the good side, and fatigues more easily, although the electrical reactions of the muscles are normal.

On the whole, the prognosis is not grave, but it must not be forgotten that there is a disturbance of equilibrium which has potentialities of other deformities, such as scoliosis and torticollis. In the few cases which have been under skilled observation over a period of years, no change for better or worse has been noticed.

Sprengel believed that the deformity came from a continued position of the arm behind the back. Paralysis has been said to be an etiologic factor. The author believes it is a development defect having its origin in the second embryonic month, when the scapula normally begins to descend from the cervical to the dorsal region. Considered thus, it is practically a malformation having to do entirely with the skeletal structure. It is noted that the closure of the vertebral clefts also occurs normally in the second month, and the coexistence of the spina bifida and other vertebral malformations is said to have some significance in support of the embryonic theory in regard to etiology of elevation of the scapula. This aspect of the subject is discussed in lengthy detail in the original paper.

Several methods of operation have been used to correct the deformity. Subcutaneous section of the rhomboid and trapezius followed by mobilization has been done by Eulenberg. Resection of the superior internal angle of the scapula has been done. Putti has fastened the scapula to the eighth rib by means of an artificial ligament with good result. The author has fastened it to the spinous process of the tenth dorsal and obtained good function. The muscle attachments on the internal border have been transplanted upward. A rational method devised by Ombredanne consists in fixing the upper edge to a rib after resection of the upper angle and pulling the scapula down, this fixation acting as a pivot on which the movements are made. The milder cases may yield to physiotherapy and braces.

## 2. NON-REDUCIBLE CONGENITAL DISLOCATIONS AND THEIR TREATMENT BY MEANS OF THE "FORKING OF THE FEMORAL END" OPERATION OF LORENZ.—V. Baeyer. Friedrich Loeffler. Archiv. f. Orthop und Unfall-Chir., Vol XXIII, 1, 1924, p. 38.

Adult patients with congenital dislocation, who suffer constant pain in the luxated hip joint, the lumbar and sacral regions of the spine, and radiating pain in the thighs, who are disabled in their walking to a great extent, and are afflicted with lordosis and adduction and flexion deformities of the thigh, should be submitted to corrective treatment. The bloodless operation is practically out of question; the open reduction is possible only in a very limited number of cases, and then the result is very doubtful while the procedure remains a dangerous one. The Lorenz-v. Baeyer bifurcation operation is the only one which promises success in respect to increase of function, amelioration of pain, and improvement in appear-

ance. Although it is only a palliative procedure, it is simple, without danger, and gives the best results in these obstinate defects. The author has performed twenty operations of this kind and has obtained very satisfactory improvement in all the cases. The operation as outlined by Lorenz is as follows: Having previously determined the distance of the upper edge of the trochanter major from the acetabulum by means of a roentgenogram, the upper end of the femoral shaft is osteotomized obliquely. The osteotome is directed towards the acetabulum from the outside below to the inside above. The osteotomy should be complete. The lower end of the femur is turned inward by abduction of the leg, moved ventrally by slight hyperextension, and by means of strong upward pressure, it is placed in the acetabular cavity. A plaster spica including the foot is applied, with the leg in 30-40 degrees of abduction and slight hyperextension. The plaster splint is kept on for twelve weeks. Eight days after the operation a roentgenogram is taken to learn whether the peripheral end is well in the acetabulum; if not, a correction is made in the abducted position. This procedure is applicable in other than congenital dislocations, such as pathological, traumatic and paralytic hip dislocations, pseudoarthrosis of the neck of femur, difficult cases of arthritis deformans, coxa valga luxans, etc.

## 3. RHEUMATOID ARTHRITIS, WITH REMARKS ON THE USE OF COLEY'S TOXIN IN THE TREATMENT OF THIS CONDITION.—Robert Torrey and Thomas Klein, Am. Journal Med. Sciences, Feb. 1924, p. 275.

Torrey and Klein attempt to carefully differentiate rheumatoid arthritis, atrophic type, from the general group of arthritis deformans, and in particular from osteoarthritis, hypertrophic in character.

They favor the use of Coley's toxin, prepared from cultures of a virulent streptococcus originally derived from cases of erysipelas, combined with B. prodigiosus, as a preparation that is constant in its action and toxicity and relatively stable. It is used intramuscularly, starting with a dose of one-quarter of a minim every two to five days, and doubling the dose until reaction occurs. As the dose is increased to seven or eight minims, the point of extreme tolerance is likely to be reached, and no larger dose is efficient. They state that this method has been very successful in combatting the acute inflammatory reaction in the joints. Contractures should be corrected and the usual physiotherapeutic adjuvants used. Foci of infection should receive proper attention.

## 4. A WRITING MACHINE FOR PERSONS WITH AMPUTATED HANDS.—Liautard. Presse M., May 17, 1924, p. 841.

This apparatus is designed for patients who are unable to hold a pencil, because of amputation or other disability. It consists of a smooth plate, holding the paper, and a pencil held above it on a bracket. The paper is moved under the stationary pencil and is held against it by four springs fastened to the bottom of the flat box, which furnishes the frame work for the entire apparatus. To make the space between words and lines the paper is separated from the pencil point by pressure downward. In short, instead of the pencil being moved over the paper, the paper is moved under the pencil. Illustrations accompany the description.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
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### THE RELATION OF THE NATIONAL TUBERCULOSIS ASSOCIATION TO MEDICAL RESEARCH IN TUBERCULOSIS.—Edward R. Baldwin. The American Review of Tuberculosis, June, 1924.

Even the scientific knowledge seems at present so far in advance of its practical application it should be continued with even greater enthusiasm as it must always lead the way in the control of disease. Tuberculosis has to a large extent been neglected or left to its victims to study. While much has been accomplished there is great need for endowments and foundations to enable workers to undertake prolonged study of it as little can be expected from short and more or less superficial work.

Research workers are hampered in the United States especially, by too great a desire for quick results and a cure. The greatest work the Association could undertake would be the adequate support of earnest research workers over periods of time sufficient to allow serious experimental work on a large scale.

### END RESULTS OF SIX HUNDRED CASES OF PULMONARY TUBERCULOSIS TREATED BY ARTIFICIAL PNEUMOTHORAX.—Ray W. Matson, Ralph C. Matson and Marr Bisaillon. The American Review of Tuberculosis, June, 1924.

End results of cases receiving this treatment seem to depend upon the type of disease, the character of the pneumothorax and the status of the contralateral lung. The best results were obtained in cases of the chronic fibro-caseous type with no demonstrable cavities, no adhesions sufficient to prevent collapse and with the "good" lung practically free from disease. Disease in the opposite side is not necessarily a contra-indication as it often improves with the improvement of the collapsed lung. This is largely dependent upon the degree of collapse obtained.

Pneumothorax is rarely justified as a palliative measure in terminal cases as the benefits are slight and never lasting. Tuberculous laryngitis is not in itself a contra-indication as it usually improves with the lung. Tuberculous enteritis if severe enough to interfere with nutrition is considered a contra-indication.

The "gas embolism pleural shock" symptom complex occurred nineteen times in over 12,000 fillings and was fatal in two cases. Tuberculous empyema occurred in 12 per cent of the collapsed cases but was not serious unless open drainage was established. Serous exudates occurred in practically every case at some time during the treatment but was not a serious complication so long as it remained serous. Spontaneous pneumothorax occurred in sixteen cases and was fatal in three. Pleurisy with effusion on the non-collapsed side occurred seven times. Progression of disease in the non-collapsed lung occurred 43 times.

Adhesions are the greatest obstacle to a satisfactory collapse as they are almost always present in cases needing this treatment.

Only 480 of the 600 cases studied here received actual pneumothorax treatment. 235 of these were satisfactory collapse cases of whom 48 per cent are clinically well, 18 per cent arrested, and 22 per cent dead. Of the 245 partial collapse cases, 11 per cent are clinically well, 12 per cent arrested and 58 per cent dead. These results seem to justify the use of pneumothorax earlier in the course of disease than is usual, without subjecting the patient to so long a trial of sanatorium routine.

### ARTIFICIAL PNEUMOTHORAX WITH NECROPSY.—Joseph Walsh. The American Review of Tuberculosis, June, 1924.

Seven pneumothorax cases coming to autopsy are reported and some of the reasons for failure of the treatment are explained.

Two of these cases died from spontaneous pneumothorax on the "good" side, one within twenty-four hours after the first treatment. The other made some clinical improvement but soon had a rapid relapse and the autopsy showed no change in the condition. One died from infection of the pneumothorax after long clinical improvement, autopsy showed no improvement in the pathological condition however. One showed no improvement and died from pneumothorax. One, no improvement and condition possibly aggravated by one treatment. One, no improvement and death from natural advance of caseous condition. One, no improvement due to extensive disease on the other side.

These findings seem to show that while pneumothorax may have a temporary palliative effect on advanced cases, it does not change the course of the disease nor the patient's reaction to it, nor can it create the tendency to formation of fibrous tissue where this does not exist.

### SPONTANEOUS PNEUMOTHORAX DURING THE COURSE OF ARTIFICIAL PNEUMOTHORAX.—I. D. Bronfin. The American Review of Tuberculosis, June, 1924.

This accident is fairly frequent having occurred six times in a group of forty-three initial cases during a period of ten months. The exact cause is unknown but many think it due to the rupture of marginal emphysematous blebs. X-ray plates should be carefully studied with a view to the possibility of recognizing these blebs. Spontaneous pneumothorax may also be produced by the introduction of a needle into the lung even though there is apparently no free pleural space.

Severe pain soon after a filling with or without a rise of temperature and a subsequent effusion should lead one to consider the possibility of a spontaneous pneumothorax.

Treatment depends upon the type of pneumothorax. The large closed type with severe symptoms demands the aspiration of large quantities of air. When the symptoms are not so severe it is safer not to interfere as there is a possibility of re-opening the pleural tear from sudden re-expansion of the lung. Valvular pneumothoraces require the introduction of a rubber catheter into the pleural cavity for the continuous aspiration of air. There is little danger of pleural infection in doing this. Circulatory symptoms not relieved by relief of pressure are treated by the use of digitalis. Empyema is best treated by repeated aspirations with or without replacement of air rather than by rib resection and open drainage.

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### SOME PHASES OF INDUSTRIAL SURGERY\*

FRED S. CLINTON, M.D., F.A.C.S.  
TULSA

The present complex conditions present many new and complicated problems demanding satisfactory solution. The pursuit of worthy professional ideals has led into new and strange surroundings. If the prophets fail the people perish. If the profession can no longer subsist the patients may not long survive. Intelligent recognition of present economic conditions and future requirements of efficiency not only invites but demands full and frank discussion of *some phases of industrial surgery*. The medical profession is imbued with generous impulses and poor business judgments, so this interchange of experience will be helpful to all.

There are so many angles to this work that it is not best to undertake discussion of all of them at this time but to suggest a symposium to which contributions may be made at the next regular meeting of this body.

The practice of medicine and surgery is in the transitional stage and changes are coming so rapidly in Oklahoma that it behooves the members of the profession to give of their best thought in guiding and shaping the present and future policy if society is to reap the merited reward for all the suffering and sacrifice of the past. If the profession does not cooperate and point the way supervising government clerks and subsidizing industrial interests will commercialize it and rob it of its justly earned position and usefulness.

The members of the medical profession should be treated with equal regard with the legal profession. The restoration to economic usefulness and safeguarding of human life is a greater privilege and responsibility than the mere safeguarding of property rights.

The value of a capable and conscientious surgeon should be appreciated and capitalized by society, and for society to reap the fullest fruits of his great and priceless service cooperation (not competition) and freedom of action should be vouchsafed. Broadminded and far visioned medical men must get

into the vanguard and aid society to organize into intelligent leadership for the ultimate benefit of the patient—the great middle class and poor who toil and frequently require relief from illness or repair for injury.

The profession must be aroused to the perils which beset it under the numerous forms of paternalism, insurance, lodges, clinics and other governmental and pseudo philanthropic agencies which may be subsidized by certain interests to escape their responsibility.

America stands today the unchallenged giant of all the world in her unrivalled industrial achievements. She likewise is the mecca of medicine and surgery.

The opportunity for self expression and initiative plus the wide diffusion of knowledge by master minds in America has stimulated this proud profession to do its best, however, the increased demands on account of wider diffused knowledge, the large amount of paper work, the greater hazards of legal entanglements, the increased attendance at commission and court sessions, and the ever increasing division of labor and cost of necessities without prompt settlements at a living wage will tend to discourage the right kind of men entering the profession. If the medical profession does not take an active interest in this reconstructive period of its affairs, the industrial commissions, claim agents, government clerks, politicians and paid agents of interests will shape the policy and pay through legislation and moulded public sentiment while an incoordinated profession continues to work its own destruction through ill advised charities to those able to pay, and unreasonable competition in an effort to serve corporations and the public.

The laborer is worthy of his hire, however no true physician has ever refused to serve in any crisis and they should not be embarrassed or handicapped by the necessity of searching for those financially responsible for the care of the patient. The public should be taught their respectable responsibility and that they should not impoverish themselves or pauperize the profession.

To the end that the people and the profession may intelligently cooperate in solving this pressing problem of service and reasonable and prompt compensation, the follow-

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

ing brief suggestions are offered.

1. Begin now, for presentation at the next meeting, a symposium by experienced and qualified men dealing with the various phases of industrial and other public practice.

2. Keep the service of the hospital and physician separate.

3. Let charity hospitals be operated as such. Admit no pay patients to them. Draft the best professional talent in the city or county for the major work.

4. Request promptly written requisitions from proper representatives of all corporations, lodges, organizations or others authorizing the service and agreeing to pay for same. This is very important as it early secures the cooperation of parties concerned and tends to teach individual responsibility. At present the physician, hospital and attendants carry the load which should be equitably distributed.

It has been estimated that seventy per cent of so called charity patients are able to pay for their hospital care. Society should be relieved of this false charity and economic waste and its resources applied to those worthy of assistance.

5. Industry should make proper allowance in its budget for the necessary hospital and medical care of its employes and pay promptly as these patients frequently require the most exacting and expensive attention which is too soon forgotten.

6. The Industrial Commission should have adequate aid to more promptly dispose of its cases. They should have intelligent and experienced counsel for interpretation of technical and professional matters as well as determining the value of such service.

7. Develop a sense of individual obligation and responsibility of patient for hospital and surgeons care where no legal liability is acknowledged or assumed at the beginning of treatment of employes in emergency cases.

8. No selfish purpose but a sound principle should control in an effort to reach an equitable basis of efficient, effective and economic service to the public.

9. Arouse the profession and educate the people and they will respond. This affects all society and cooperation with the various leaders should be had. Publicity is the great remedy for many wrongs. The intelligent use of the printing press like the scalpel in the skilled surgeons hands will do more than any other agency to remove this incubus. All plans and information should be disseminated and the journals and newspapers are always

ready and willing to aid in matters of vital interest to the upbuilding of citizenship and improvement of society.

No true physician will evade the responsibilities of citizenship, so let us reason together.

## VOMITING OF INFANCY AND EARLY CHILDHOOD\*

C. V. RICE, M.D.

MUSKOGEE

In taking up this subject, we will omit the types of vomiting in infancy and early childhood that are due to diseases of the brain or meninges, or to gastro-intestinal and infectious diseases, and we will describe those which may be classified as follows:

1. Habitual vomiting.
2. Vomiting due to pyloric spasm.
3. Vomiting due to pyloric stenosis.
4. Recurrent vomiting.

Habitual vomiting is the least dangerous to life and may occur from the second week to the third month. These babies as a rule, are of the nervous type and the parents may show an unstable nervous system. The clinical symptoms may resemble those of pyloric stenosis, only you do not find the peristaltic wave nor the pyloric tumor. The stools may be loose or constipated and more copious than in stenosis and the urine is not so scant. This condition may occur in the breast fed, as well as the artificially fed child. In fact, it is often thought that the mother's milk does not agree with the infant and he is removed from the breast and given artificial food, but no improvement is made and the results of experimenting with different foods are unsatisfactory. These cases are then brought to us when they are three or four months old and are very much dehydrated and are of the decomposition type of Finklestein. The treatment of these cases will be given in case histories.

Baby G., age three months, normal birth. Birth weight 9 lbs., present weight 8 1-2 lbs. Very much dehydrated and all symptoms of starvation. At the age of one month this baby was vomiting after each nursing so was removed from the breast and tried on different foods without any satisfactory results. The differential diagnosis in this case was pyloric spasm from habitual vomiting. The baby was kept under observation for one week and fed whole lactic acid milk with Karo syrup, four ounces every four hours.

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

If he vomited following feeding, he was re-fed and at the end of the week the vomiting subsided. He was then sent home, but is brought to the office every two weeks for instructing the mother and at this time is gaining in weight, with no more vomiting.

### *Pyloric Spasm*

This condition is more often found in the artificially fed baby and he is usually of the neurotic type. It may appear shortly after birth, then again, it may not occur until the baby is several months old, and the vomiting is at times explosive while again it is not. There is a tendency to constipation, but the stool is not a starving stool as a considerable portion of the food passes through the pylorus into the intestine. The disturbance of nutrition is not extreme. In severe cases, the peristaltic wave may be seen and the tumor may be felt at the pylorus, but as a rule, it is much smaller than found in the stenosis type. The X-Ray plates never show evidence of complete occlusion.

Baby R. Age ten months, normal birth. This baby was breast fed until two months old when he was removed from the breast as he vomited after each nursing. He had been on every kind of food and was very much underweight, pale and emaciated. The condition had been diagnosed as pyloric stenosis and the mother had been advised that it was an operative case. The differential diagnosis here was spasm from stenosis. As the child was ten months old, not as emaciated as one would expect in a stenosis case and the stools were a fair size, the diagnosis was made of pyloric spasm and he was put on the following diet: Thick gruel, Cream of Wheat, farina, rice, toast crumbs in thick vegetable soup, baked potatoes, and strained carrot, spinach or squash. This baby made a wonderful gain in weight from the start and the vomiting subsided as soon as it was put on the heavy soft diet, resulting in a complete cure.

### *Pyloric Stenosis*

Vomiting may begin in the first few days of life and may not appear until the second, third or fourth week, seldom after the first month. It occurs more often after nursing and is explosive in character. There is rarely a bowel movement but if there should be one it is of the starvation type. The urine is scanty, loss of weight is rapid, the skin is dry and wrinkled, the face is pinched and the child has all symptoms of starvation. After food is taken, there is a wave of peristalsis running across the stomach from left to right and this can be plainly seen in all cases. A tumor may be felt and it is the

size and shape of an olive. It is most easily felt during the relaxation period after the vomiting. On a bismuth meal, the X-ray shows that the bismuth remains in the stomach for many hours if it is not vomited.

The diagnosis between stenosis and spasm of the pylorus is at times very difficult. If the baby is breast fed, the chances are much in favor of stenosis and if artificially fed spasm is the more probable. The cases that do not respond to diet and drug therapy are more suggestive of stenosis. The treatment of the stenosis type is diet and surgical. If there is complete occlusion, one should not experiment long with drugs and diet, allowing the child to become morbid before resorting to surgery. The first of the following cases was treated by the thick gruel method and the second case operated.

Case 1. Baby G. Age six weeks, normal birth. Breast fed. Birth weight 6 1-2 lbs., present weight 5 lbs. This baby had all the cardinal symptoms of pyloric stenosis, including the retained bismuth meal. As he had small bowel movements I felt that I could temporize. We had a very stormy time and I was ready to give up the thick gruel feeding and resort to surgery when the baby showed some improvement. A few days more on this treatment brought about a complete recovery. The method of treatment was as follows:

- 6 Tablespoons rice flour.
- 10 Ounces skim milk.
- 2 Tablespoons dextrin-maltose.
- 20 Ounces of water.

Boiled one hour over direct flame and fed 2 1-2 ounces every four hours. This made a very thick gruel. The end of a hygieia nipple was cut off so the food could pass through and it was placed in the nipple with a spoon. Two ounces of water was given per rectum every two hours. Two days later, five ounces of skim milk was replaced with five ounces of mother's milk and a few days after this, some of the water was replaced with more skim milk and breast milk. About six days after these changes, all the skim milk in the gruel was replaced with breast milk and a little later the baby was fed a couple ounces of thick gruel and then put to the breast and nursed. About twenty days of thick gruel and breast feeding and the baby was able to take breast feeding without vomiting but the peristaltic wave remained and could be plainly seen for several weeks after all vomiting had subsided. This baby was under treatment and observation for six weeks and at the end of that time had gained 2 1-2 lbs.

Case 2. Baby C. Age 3 weeks, normal birth, breast fed. Birth weight, 8 lbs., present weight 6 lbs. This baby had all the cardinal symptoms of pyloric stenosis, no bowel movements, urine very scant, retention of the bismuth meal for hours, and was in a severe stage of starvation. Due to its condition I did not think it best to temporize and deciding that it was purely a surgical case, sent it to the hospital. The dehydration was overcome by giving normal saline in the longitudinal sinus and intraperitoneal. As soon as the babe was saturated with fluids a Rampstead operation was done and he stood it wonderfully well. He was given a little water per mouth a few hours following the operation, then half breast milk and water for a few feedings and then the whole breast milk. The baby never vomited again after the operation and made an uneventful recovery.

#### *Cycle or Recurrent Vomiting*

This condition has a sudden onset without any apparent cause. The cases reported by Still, range in age from two weeks to 11 1-2 years. These attacks may occur every week or there may be three or four during the year. The recurrence may continue throughout childhood or may cease at any time, so we are unable to give any prognosis as to the duration of the disease. The duration of an attack may be only a few hours, a week or longer but the average is from two to three days and the severity of an attack is just as variable. The vomiting may be mild or so severe that there is great prostration, collapse and threatening death, or death may result from acidosis. The attack terminates by crisis and the paroxysms of vomiting become less frequent with longer intervals of sleep and then cease. Convalescence is remarkably rapid and within a few days the child is as well as ever.

Griffeth thinks that the condition is due to a toxic neurosis occurring in those infants and children especially predisposed to it and that the outbreak is due to a poison accumulating in the system, but the nature of the poison has not yet been determined. He also thinks it may be an acid arising in the digestive tract and that the poison is at fault, is indicated by the degenerative changes in the kidney and other internal organs sometimes found in fatal cases.

The first day, the child's general appearance is not much changed, but after this time, the prostration is very rapid and the child has the appearance of being in shock. The mental condition remains clear in comparison

with the severity of the vomiting and prostration until acidosis develops and then there is as a rule, an improvement in the vomiting but the child becomes drowsy and sluggish with deep, rapid breathing. In fatal cases the pulse becomes weak and rapid and the respiration weak and shallow. If the child is under two years, the chances are against recovery after acidosis has developed, regardless of any method of treatment.

The treatment of recurrent vomiting is in keeping the patient from developing acidosis. This is done by keeping fluids in the tissues and by giving no fluid nor medicine by mouth. There is no drug of any great value in controlling vomiting and as it is self-limiting, we must keep dehydration and acidosis in mind. The child must be put at once on rectal feeding in the form of glucose, 4 ounces 5 per cent every four hours, with normal saline intraperitoneal. In severe cases, bromides and chloral should be given per rectum. Morphine should not be given, if any at all in very desperate cases which resist the bromides, as it seems to increase the toxemia of the disease. Sodium bicarbonate is better given when there is evidence of prodromata. It is to be given in 10 to 30 grains every two hours until the urine becomes strongly alkaline and then the dose is to be decreased and only enough given to keep the urine alkaline. It is well when recognizing the prodromata, to open up the bowels and reduce the amount of food and to increase the elimination by adding fluids to the tissues by the direct injections of normal saline into the subcutaneous tissue, vein or intraperitoneal cavity. If the case is not seen before acidosis has developed, it would be necessary to neutralize the acid in the blood by giving sodium bicarbonate and glucose. These and sodium bromide may be given to older children per rectum. If sodium bicarbonate is heated in the presence of moisture, a chemical change takes place forming sodium carbonate which is irritating to the skin and causes a slough, therefore it is necessary to sterilize it dry and not add to the solution until ready for use. Alkali is slowly absorbed so the amount is limited from 75 to 100 c.c. of a 5 per cent solution under the skin at one time. The better route of choice in infants and young children is by the intravenous injection, either in a scalp vein or jugular vein or in the longitudinal sinus and the older children in the vein at the elbow.

In conclusion, I wish to emphasize the fact that the most important part of the treatment is getting fluids into the system, preventing acidosis.

SOME MEDICAL AND SURGICAL  
PHASES OF OBSTETRICS\*GEORGE R. OSBORN, M.D., F.A.C.S.  
TULSA

Obstetrics, like surgery, was practiced as a specialty before it attained the dignity of a medical or scientific specialty; midwifery being the forerunner of obstetrics as the barber preceded the surgeon. Originally, however, the physician or so-called medical man was probably less scientific than either the midwife or the barber, but the evolution of each of these three primitive specialties has been equally marvelous and equally due to the application of scientific knowledge and technique.

In this age of specialties there are many branches or divisions of both medicine and surgery, mostly as a result of the complexity of our civilization. Some of these branches, however, anastomose, and ill defined specialties develop. Gynecology is one of these.

Obstetrics, however, is essentially a fundamental specialty dealing with a fundamental life process; namely, reproduction as it pertains to the female.

In this process of reproduction is included, pregnancy, labor and the puerperium, together with those phases of the child-bearing period related thereto.

Such a definition includes Gynecology—that maiden of unknown paternity, so ardently courted by the surgeons. Obstetrics should at least chaperone her until she arrives at the menopause. I give obstetrics this broad and inclusive definition because it is a specialty dealing with a special functional period in the life of woman, rather than with a particular disease, anatomical region or group of organs.

The process of reproduction as it pertains to the female, however, is effected by disease and anatomical conditions and therefore presents both medical and surgical phases.

Pregnancy presents problems, chiefly medical, while the conduct of labor or the termination of pregnancy and the puerperium, are essentially surgical. During pregnancy the diagnoses and treatment of toxemias incident thereto and of complicating diseases demand careful medical attention.

Medical history on the toxemias of pregnancy is a distressing record as no accepted treatment based upon known pathology nor etiology has been evolved and the resulting

mortality both foetal and maternal is today so enormous that it is a sorry reflection upon medical science. However, this stigma, upon practical medicine might be removed and this mortality reduced to near the vanishing point if all who practice obstetrics realized and observed the importance of prenatal care and the early diagnosis of these toxemias.

The reports from prenatal clinics and the records of competent obstetricians of today, prove this statement, so that the time is upon us when damage suits will be brought against practitioners who permit eclampsia to develop in patients for whom they have accepted responsibility by engaging to give them prenatal care.

Nowhere is the old adage "An ounce of prevention is worth a pound of cure," more true than in the care of the pregnant woman.

Diagnosis is the most important phase of medical practice in all specialties and is oftenest slighted or neglected in the practice of obstetrics because the laity as well as the indifferent practitioner consider child bearing a normal process.

Every pregnant woman should be examined carefully and a record made of her personal history, subjective symptoms, and physical condition. Routine examinations impel one to be systematic. Special training or years of experience, tend to develop a habit of routine, but there are two kinds, the complete and incomplete. Keeping abreast of the times will enable one to develop a complete system of examination or diagnostic technique. Too much emphasis cannot be put upon careful routine examination in obstetrical practice for by it, tactile sense and power of observation, the best instruments in the armamentarium of the diagnostician can be developed to a degree which will enable one to make fine distinctions and to evolve accurate conclusions. I once heard the late Dr. A. C. Kimberlin of Indianapolis say that he was inclined almost to deplore the popular use of laboratory methods of diagnosis, for the reason that so much dependence had been put upon them, and that the old special sense methods had been neglected and had fallen into disuse and many general practitioners, well trained in physical diagnosis had become timid in the presence of the man of laboratory training.

I mention this not to discredit laboratory methods of diagnosis, but to emphasize the importance of all agencies.

Nearly every pregnant woman believes that next to having a doctor present at her delivery, it is most important that he examine her urine. Admitting that a complete chemical

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

and microscopical urinalysis is important, it is only relatively so, and may not give much warning of an impending eclampsia, for some cases show no albuminuria nor other urinary symptoms within two or three days of the onset of convulsions. However, the presence of casts or a history of headaches, perhaps transient, and slight dizziness, swelling of the feet, which does not decrease at night or is accompanied by puffiness of the eyelids or face, disturbances of vision, nose bleed, nausea, ringing of the ears, muscle twitching, numbness of the limbs or fainting spells, are any of them, symptoms for serious consideration although one or more of them occurring in cases which terminate without serious trouble, are common.

The taking of blood pressure can be relied upon to warn of eclampsia sooner and more certainly than can urinalysis. A high or rising diastolic reading is of more serious import as regards toxemias of pregnancy, than is a high systolic reading.

The prevention and treatment of toxemias before they reach the tragic stage gives most excellent results, and in the hands of a careful, competent physician, no woman should develop eclampsia—and almost none should be aborted on account of hyperemesis.

The records of the Rotunda Hospital of Dublin, showing a mortality rate of six per cent in eclampsia where only medical measures are used when compared with the twenty to twenty-five per cent mortality, where induction of labor, cesarean section and other surgical measures are used routinely, leaves little room for argument as to whether the treatment of eclampsia or threatened eclampsia should be medical or surgical.

Toxemias and complicating diseases of pregnancy, medical in nature, not only cause maternal morbidity and mortality but they are also responsible for the enormous foetal mortality, and still birth rate; particularly is this true in those cases of still birth, vaguely attributed to premature birth. There is no hazard in life equal to that attendant upon being born.

With this brief discussion of the period of pregnancy, permit me to repeat that it is primarily a medical phase of obstetrics, although complications of a surgical nature do occur, such as fibroids, ovarian cysts, appendicitis, ectopic pregnancy, etc.

The obstetrician should be able to diagnose them and to determine whether surgical interference should be instituted. He should by nature be a conservative surgeon. If not, experience, if he is an apt pupil, will make him so, for the process of reproduction in the

female is not a disease, but a physiological process which naturally develops protective agencies against disease and evolves ways to overcome pathological conditions that are often times inconceivable.

Labor is a radical, abrupt and mechanical termination of the state of pregnancy; a tearing down of the anatomical relations between mother and foetus, with a forcible exit through the birth canal. Blood vessels are torn, muscle tissue and mucous membrane is lacerated and connective tissue distorted. Injuries grading from slight to serious, occur to both mother and child. Even when the birth is spontaneous nature performs a radical operation. Hemostasis, asepsis, anteseptics and repair of injuries involve surgical principles and therein lies the surgical phase of obstetrics even in a normal case.

In the conduct of labor the obstetrician must, to be successful, be a diagnostician. He must have mechanical sense and tactile sense, and common sense. Having these, he can differentiate between normal and abnormal.

No branch of surgery has been neglected as has obstetrical surgery. I do not mean that there is not enough of it done, nor that the obstetrical specialist has not kept pace with other special surgeons. However, when Arthur Brisbane, a layman, syndicating his opinions under the title "Today," broadcasts the statement taken from the vital statistics of the United States Public Health Service, which is corroborated by data published in our leading scientific journals, that 20,000 women and 250,000 infants die annually from causes incident to child-birth and then tersely comments that poor obstetrics is chiefly responsible, one feels like responding in the parlance of the court "The defence rests."

Obstetrical surgery is neglected, and it is raided by the general surgeon. De Lee (1) in one of his editorial comments in the 1923 Year Book, says that he heartily disapproves of the operative and interfering tendencies of late obstetrics, and feels sure that much of the present lamentable high maternal and fetal mortality is due to cesarean sections performed by surgeons and inexperienced operators, to routine version, to the use of bags to induce labor, to the use of pituitrin and to the premature and imperfect application of forceps.

To overcome or prevent these present day tendencies all who practice obstetrics must co-operate to elevate it as a specialty, and in so doing they will elevate themselves.

The attitude of the general surgeon and oftentimes of the general practitioner toward obstetrical surgery is peculiar. I term it pe-

culiar because so frequently we find operative obstetrics being boldly done by surgeons who would hesitate to attempt a nephrectomy, the ligation of the external carotid or the superior thyroid vessels while more skill is required to do even a mid forceps properly. And many forcep deliveries are badly done by men who would not attempt to put a trocar into an empyema nor open an abscess of Bartholins gland.

Obstetrical surgery as I have previously said includes the conduct of labor and all methods of delivery and involves the same technique and precautions as is considered necessary in the performance of any surgical operation.

In Garrison's History of Medicine (2) we find this statement: Operative gynecology, which had no special existence before the beginning of the nineteenth century, was largely the creation of a number of surgeons from the Southern States, and, as has been suggested, had its origin in the attempt to repair the errors and omissions of "backwoods obstetrics."

As we all know, operative gynecology is the most lucrative field in the realm of surgery, but, if we admit that it is founded upon the errors and omissions of obstetrics, and we must admit a proven fact, then, until these errors and omissions are corrected, the practitioner of obstetrics can expect to be poorly paid and forego the satisfaction and pleasure which comes from worth-while work.

In conclusion let me repeat that the practice of obstetrics is essentially, both medical and surgical.

He who practices obstetrics must have both medical and surgical skill. The period of pregnancy must be seriously considered as a medical phase and the conduct of labor or the termination of pregnancy a surgical phase of obstetrics.

(1) Obstetrics and Gynecology, Practical Medical Series, 1923, P. 319.

(2) History of Medicine, Garrison, Third Edition, P.542.

## ARE WE PROGRESSING IN OBSTETRICS AS IN OTHER BRANCHES? IF NOT, WHY?

JOSEPH G. SMITH, M.D.  
BARTLESVILLE

We are living today in the most interesting epoch in the world's history. Rapid strides are being made in scientific research of every description.

We look with pride upon the victories won by the medical profession; the pathology of and treatment of disease. Surgical operations upon every organ of the body performed successfully; foundations established for medical and scientific research; the study of tuberculosis and cancer. Banishing malaria and yellow fever from the wilderness and enhancing the value of commercial enterprises; all this is praise worthy however, with the Poet Clark, we say:

Of all the words of tongue or pen,  
Of all the thoughts of mortal men,  
There is no word, there is no thought  
So dear to me as that one taught  
At childhood's dawn, long years ago;  
That precious word, with visions fraught  
is "Mother."

That precious word, with visions fraught is "Mother", and yet, from 16,000 to 20,000 of these Mothers die every year in these United States from childbirth; no statistics are given of the thousands who are maimed or invalidated for life. How often do we hear "I have not been well since Baby came." The Almighty certainly intended childbirth to be a physiological process and not one of life or death to be approached with fear and trembling. The economic loss is greater than deaths from tuberculosis, cancer or any other cause. The larger percent of mortality being between the ages of 30 and 40 years, when greater havoc is wrought in well established homes. We stand upon the pinnacle of number fourteen among the sixteen civilized countries of the world, or third from the worst—an indictment of the men doing obstetrical work in this country. For years we have been reading papers, on obstetrics, reciting individual or personal skill in cesarean sections, high forceps, version, induction of labor at—supposedly—term; literary gems, abounding in rhetorical phrases and the deaths go on—Why?

New York I believe gives us the most reliable data relative to maternal mortality, other states probably will not vary much; these bulletins are accessible to all of you; however, the City of New York, including the tenement districts gives a lesser mortality rate than the State at large. In the smaller towns and districts where the general practitioner does the obstetrical work, the mortality rates are the highest, in the rural districts where they have the midwife instead of the physician, they have fewer deaths, this may be accounted for in part, in that the midwife cares for uncomplicated cases and sends for the physician when complications arise. Obstetricians in the cities of New

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

York, Brooklyn, Philadelphia, Baltimore, etc., will tell us, that all their obstetrical work is under supervision and all goes well, but when the general practitioner is turned loose, without supervision, mortality rates increase.

The lying-in hospitals of New York, Brooklyn, Philadelphia and other large clinical centers are giving wonderful service in obstetrics by precept and example, but they are like the oasis in the desert and movements toward the interior are going with the speed of a caravan of camels; some modern, up-to-date way of disseminating knowledge to the laity as well as to the physician must be advanced, or we will be forever, as we are today, behind every other department of medicine. In a paper written by Drs. Johnson and Sidall of Baltimore, it stated that a noted increase in febrile conditions was noticed among patients that had had the routine hospital preparation made for delivery, in the Johns Hopkins Hospital. In view of this fact, they decided to omit the routine ante-partum preparation in every alternate patient, clipping only the vulval hairs and compare results obtained in the two series; this was done in 389 cases with the following results; routine preparation febrile cases, 16.3 per cent. No preparation febrile cases, 12.4 per cent. Now the question arises whether or not strong disinfecting solutions and scrubbing have a tendency to irritate and lessen the resistance of the skin; also, whether or not the hairs surrounding every orifice of the body have any protecting or repelling influence over the invasion of bacteria as well as that of foreign bodies; here is food for thought and further investigation.

Again there is a tendency toward radicalism or irrational obstetrics, making delivery an artificial process rather than a physiological one, with resultant shock to the patient, cervical and perineal lacerations, presenting an ideal field for infection. A physician who does not like obstetrical work and is not willing to keep in touch with the leading teachers of the day and willing to give to every obstetrical patient, his time, patience and best judgment should refer such cases to other physicians, otherwise, he is guilty of criminal negligence.

How and in what way may we more rapidly lessen the mortality rate of mothers, in this country; England, France and other countries have regular extended courses of study for and supervisions of midwives; unless we, as general practitioners, wake up and meet the demands for better work, it will be only a question of time until the midwife will do the work in uncomplicated cases among the people of the rural districts.

Also, there is a lack of co-ordination or understanding between the general practitioner and the clinicians and teachers in the large medical centers. It is the men who are teachers and who are sponsors of the various Associations of obstetrics and gynecology, that we rightly hold in the highest esteem, and give due recognition of the high value of their labors. However, it is almost the universal opinion as expressed in papers and discussions, among obstetricians especially of eastern clinical centers that the only method for real advancement is to have clinical centers to which cases in the surrounding territory may go and that the general practitioner should care for only the simple, spontaneous, uncomplicated cases. Now then, the general men will resent the implication that they are not qualified to handle a case of obstetrics; again, considering expense and other disadvantages relative to leaving home, the patient of the fairly well and well to do classes will not go to the hospital.

The process must begin where the patients are, in their own homes, to bring about definite results, therefore I believe that publicity and education of the laity is the foundation upon which we must build, the first consideration should be pre-natal care. Co-operation between county societies and public health service should exist and through the public health nurse, every family in every county should be given pamphlets published by the American Medical Association along the line of pre-natal care and child welfare.

Then it is squarely up to the general practitioner to meet the demands of a clientele demanding real professional service. He should be able to care for his patient from the beginning of pregnancy to delivery, building up a healthful resistant body, and when the time for delivery comes, does not think of the fame attached to a cesarean, a high forceps delivery or the agility and quickness with which he can terminate labor; but give the best there is in himself to his patient. Giving his patient a chance to help herself, having patience and assist nature when absolutely necessary in making a physiological delivery. With the antiseptic and aseptic precautions taught every physician and adhering to rational obstetrics the maternal rate of the United States will be quickly and rapidly lowered.

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*Discussion:* J. P. TORREY, M.D., BARTLESVILLE

Dr. Smith's paper opens for discussion a subject which has been much in medical thought and literature of late years and must remain of importance to us until we can demonstrate by vital statistics that American physicians have caught up with the rest of the world in this department of our profession.

Dr. Smith asks the question why we are not on a par with other countries in our mortality rate.

I believe it is because the profession in general is not willing to do one of two things, either permit obstetrics to become a specialty and all others abstain from its practice or else insist that every man who takes a case give as good technique and as much time to the case he has undertaken as the specialist is willing to do.

Hurry to get through and unwillingness to use a reasonably faultless technique are the causes of our high mortality.

I am not one who believes that a general practitioner can't handle obstetrics and attend all other kinds of cases if he will keep clean, wear gloves and gown and follow the lead of our special workers in obstetrics whose text books are available for all.

I have heard men complain and rave about their dislike for obstetrics, but I never have seen but one man in all my experience who turned those cases over to other men who do like this work.

I have personally practiced general medicine and surgery many years and have never refused a confinement because of other septic cases I was attending. I have used the same care in these cases that I use in general surgery. I have worn gloves ever since it was common to wear them in obstetrics, I suppose for the past twenty years at least.

I have kept careful records of my cases so that I know the exact number I have attended and the maternal deaths that have occurred, which are three in number and none of them from infection directly or indirectly. I have used pituitary extract very sparingly, forceps in about one-third of my cases. I have had seven lacerations of perineum in the last series of 167 cases, only one of the seven extensive and most of them not in forceps cases. I call anything over one-half inch a laceration and I look for them in every case.

I would commend Dr. Smith's paper as timely and I can vouch for the fact that Dr. Smith is doing good obstetric work in Bartlesville.

## CARE OF THE PREGNANT WOMAN BY THE GENERAL PRACTITIONER\*

R. M. ANDERSON, M.D.  
SHAWNEE

Some time ago I heard a minister preaching on tithing. He could have told us what he did in two or three sermons, yet he took two weeks, preaching every night, hammering his subject in, with the result that there are now over three hundred members of our church signed up to tithe. What has been and is being said in papers each year on The Care of Our Pregnant Women could be said in a few chapters, but as for me I get more out of this subject by having it hammered in every time a few of us get together.

The knowledge of how to take care of the pregnant woman is something we need every day. I remember hearing Doctor Hatchett say once that he did not care to attend a woman, who had not been under his care for several months before her expected time of delivery. I think he is right. I have had a few women to come and consult me as to the advisability of their, at that time, becoming pregnant, as they were anxious to become mothers. This is not a bad thing to do as it gives the physician a chance to question and if necessary examine the patient to see if she can safely carry a child to term and be delivered. I do like to be consulted just as soon as there is a suspicion that pregnancy has taken place.

When we think of the 16,000 women who die in the United States annually in labor, then think of the maternal morbidity, knowing from census reports, that neither maternal morbidity nor mortality has been reduced in the past several years, we should pay attention to the little things, not new, that I wish to bring out in this paper. When we are engaged to take care of a confinement we should sit down and go into the history of the patient enough to know that she can safely carry her child to term and be successfully delivered; at any rate we should find out if there is anything to be corrected or watched during her puerperium. After we are satisfied from examinations and measurements, especially in the primipara, that she can safely carry the conception through, then it is our duty to instruct her what to do. Her dress should be light, though warm, and hang from the shoulders. No tight girdle around the waist. A maternity corset or supporter is often needed, especially in pendulous ab-

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

domen, but great care should be used in the selection, seeing that she does not try to wear an imperfectly fitting corset. As to her bowels I am against purgatives as a routine. A proper diet with vegetables and fruit and plenty of water from early morning until late at night will usually be sufficient, if not, enemas may be resorted to. Maybe it will be necessary to inject two or three ounces of olive oil at night before retiring, leaving it in the bowels until morning. If we do have to resort to purgatives, a mild saline or cascara, I think, is the best.

The kidneys can be called the barometer during pregnancy. The patient should furnish a specimen every thirty days, until the seventh month and then every fifteen days until term. This is my routine. If symptoms demand it—and we should instruct her what to look for—a specimen should be furnished even more often. I can recall three cases I have had real lately, when the examination of the urine, plus the blood pressure examination has helped very much. In these cases I was able to foretell the possibility of eclampsia and had the family prepared for these attacks. Two of the three did go into convulsion, at which time I moved them to the hospital and delivered them with no further trouble. When I speak of a urinalysis I mean a chemical and microscopic examination too, and not just to look at it and throw it into the sink. A pregnant woman should pass not less than three pints in twenty-four hours.

As to exercise, I usually feel relieved when she tells me she is doing her own house work; that is always best unless it becomes too strenuous. She should not ride horse back or in an automobile over rough roads, but she should take a walk every day short of fatigue. Everything should be pleasant around her and she should not be allowed to worry about maternal impressions, for by the time she knows she is pregnant the child is formed and there is no chance of its being changed by fright, or seeing monstrosities. If the breasts are large a comfortable binder which may be attached to the abdominal binder may be used. For the nipples an application—after they have been washed with a good soap—of alboline or cocoa butter may be applied. To preserve the figure she should not be allowed to strain during her bowel movements, or to wear high heeled shoes, the wearing of which throws the body backward in order to keep her equilibrium. To prevent over stretching of the skin over the abdomen an application of alboline or olive oil is good. This may prevent or lessen the linea gravidarum.

While I have not made a practice of running a Wassermann on every patient except in cases where there have been several miscarriages, or abortions, I believe it is not a bad thing to do. In the past five years I have delivered over eight hundred babies and have taken a specimen of blood from the cord of each of these cases, with a result of about four per cent positive Wassermann. In a few cases I have had the opportunity of checking up the mother's blood and having them treated for lues.

As to the place for our patients during confinement I much prefer the hospital, especially for the first baby. I have told some of the prospective patients that I believe in it so strongly that if I were a woman and a young man were to ask me to marry him, I would be tempted to say "yes, if you will promise me that our first baby will be born in a hospital." I do not get as many there as I like, but I believe that the hospital is growing more and more in favor with our women.

As we have to deliver so many in the home I am going to tell you as nearly as I can my procedure. I never make an examination without gloves, and we should make as few of them as we can. I make all mine vaginally, as I have never perfected my sense of touch through the walls of the rectum. After I examine the patient if I find the os rigid, pains aggravating and with slow dilatation, I often give one-fourth grain morphine hypodermically. I never used "twilight sleep," neither do I use at it, claiming that I do. My favorite anesthesia is ether during the second stage. When I can not get a hospital trained nurse, using only a practical woman, and we have most of our cases with that kind of help I prepare the patient myself. First, I inquire into the condition of her kidneys and bowels, and often times I find it necessary to have her take an enema. Then as she nears the second stage I ask for a clean sheet that has been ironed and folded, requesting that it not be unfolded. I then unfold it myself so that it will be about twenty or twenty-four inches square and place it on one of the Impenetro obstetrical sheets, put out by Upjohn; this can be folded and slipped under the knees and then under the hips, after the gown has been pushed up to the shoulders, in such a way that the sheet does not touch anything until it is safely under her. I then drape her with another sheet, so that I can have the field of work free and exposed. I then take a basin of bichloride solution and prepare the patient taking great care in separating the labia, especially that part of the labia minora that forms the prepuce of the clitoris. There we find a good bed in the smegma for

bacteria. I am sorry we can not have all our patients in the homes shaved as we do in the hospital. I have taken my scissors and removed some of the hair when it is long and thick. In some of my cases when the membrane is tight over the head and I do not get the desired dilating help from it, I push the head back and let more water come down in front with good results. It is best not to get impatient and break the membrane too soon for you then lose the hydrostatic effect which I consider very important.

I want to say a few words about pituitrin. When we use it we are dealing with a powerful and dangerous drug, both to mother and child, yet it has its place and I think a good place at times. When we are dealing with a multipara nearing or in the second stage, the cervix completely dilated or dilatable, knowing that the passenger is not larger than the passage, with good position and still the expulsive powers are insufficient to accomplish delivery, the use of a few drops of pituitrin, I believe, is better than the forceps. Then in postpartum hemorrhage due to a failure to contraction a full c.c. is indicated and should be given.

I believe the general surgeon doing obstetrics will use forceps more frequently than the physician whose practice is mostly obstetrics. A good obstetrician must learn to be patient, however he must know when to interfere and not put off too long the use of instruments. In nearly all my primipara in the hospital and a few in the homes, I do an episiotomy, (I like the lateral slightly oblique) as I believe there is less morbidity following these cases than when we let the perineum tear toward the rectum.

When the baby is delivered I make a double tie, using a piece of a one inch bandage which has been boiled with my instruments. I now get my specimen for a Wassermann before the cord has been clamped or bruised, and then I examine my patient for tears, and prepare for repairing the same; I sometimes take care of the laceration before and some times after the delivery of the placenta. I prefer the chromic cat gut, or if I do use the plain I also use one or two silk worn, especially if there is much tear, that I may be sure of my work not giving way too soon. Do not be too hasty in delivering the placenta and I would like to stress the importance of a careful examination of it. This having been done, if any one's foot should slip (and there are some times many feet connected with a home delivery) and you should have a septicemia, it is easier to convince the family that you must keep out of the uterus.

While the nurse is oiling the baby I take care of my patient. First, I cleanse her, keeping away from the vulva, tucking the sheet she is on under her in such a way that I cover up the soiled parts; I then put on a sterile vulva pad, requesting her to put her knees together; then I roll her toward my side, rolling the impenetro sheet as far under her as I can, now placing a clean sheet folded and half rolled against this, I push her over on to her other side, remove the old and finish unrolling the new. She is now ready to turn on her back and rest several hours. Her gown and bed linens are usually not soiled any when this is done. My attention is now directed to the care of the eyes and cord.

### A DEFINITE PROGRAM FOR 1925\*

FREDERICK C. WARNSHUIS, M.D.  
Secretary Michigan State Medical Society  
GRAND RAPIDS, MICH.

Before I address myself to the subject assigned, I wish to make it quite clear that I have not the desire to pose as a director or an authority. The suggestions that will be presented represent present conclusions that have been reached. They are advanced for the purpose of submitting a basis from which, by our combined experiences, judgment and discussion, it is hoped that a desired outline of uniform activity for 1925 may result.

For some twelve years I have been privileged to attend these annual conferences. That they are valuable has long since been established. That good has come from them is attested to. In my administrative work I have derived much that has been of value and assistance. The acquaintanceship that has been fostered I prize most highly. However, in spite of these acknowledged benefits there has been growing on me a feeling that is hard to put aside, that we as state secretaries are not obtaining all that can and should result from these annual meetings. Are we profiting as we should? Are our component state units and our American Medical Association neglecting an opportunity?

Organization and organized effort succeed just so far as they meet up to the principles that inspire and govern their existence. It follows that unless these principles and policies are comprehensive, the purposes and achievements of an organization or association will be narrow and limited or broad and inclusive. If we are to attain the greatest ends, achieve the greatest good and contribute a maximum amount of assistance to our membership and

\*Address before meeting of State Officers and Editors, Chicago, November 1924.

the public at large, it is quite essential and important that our principles and purposes shall include certain definite and basic objects that are expressed in a program to guide our individual and collective efforts in a uniform execution of them by each component unit, thereby establishing a national program of sustained action.

I have frequently, and for a long period of time, mediated on this problem. I have reviewed, criticized and appraised our scheme of organization, the work that was being done and the results that were being obtained. I have endeavored to analyze them diligently seeking to determine what were and what were not basic fundamentals. The quest has been to sift out and to formulate in concrete terms primal objects to justify, inspire and direct our work. The result of this study and thought has been the formulation of four principles that are expressive of desirable objectives that we as county, state and national units should seek to attain. They are advanced at this time with considerable hesitation. I purpose to outline in some detail the first principle as a definite recommendation that it comprise our program for 1925. The terms used to express these definite objectives are simple, but lend themselves to broad interpretation and are:

1. Acquaintance—to bring about understanding.
2. Fellowship—to establish good will.
3. Friendship—to encourage brotherhood.
4. Education—to increase individual efficiency.

#### ACQUAINTANCE—TO BRING ABOUT UNDERSTANDING

At first thought, one will hesitate to accept this as the first fundamental object that is basic for our organized existence and work. Permit me to enlarge on all that is included in the term acquaintance, and what can be made to result from an acquaintanceship that is employed to bring about understanding.

Membership is fundamental; that will be acknowledged. The last annual report of our Secretary imparts that there are 145,966 graduates of medicine in this country. He further imparts that there are 3,047 county medical societies and that these county societies comprise our component state societies and have a membership of 90,056 physicians. That the total Fellowship of the American Medical Association was 51,063, April 1, and is now more than 55,000. These figures furnish much for thought, if one analyze them. The query is pertinent: Why, of the total number of physicians in this country, are there only 90,056 members of county societies and why are only 56.8 per cent. of these county society members Fellows of the American Medical

Association? Is not the answer lack of acquaintanceship? Acquaintanceship with the principles and purposes that our organizations are based on and what they are attempting and how they are and can be of greater value to the individual physician if he but knew—had acquaintanceship with our work and more intimate contact with that which is being done. You and certain others know what we are striving for. Now reflect on that large number of practitioners who are totally ignorant, uninformed and misinformed. Go back to your own state, your own county, your own city and recall how many of the physicians that you are in more or less contact with who are in great ignorance regarding the work of your state society and who know nothing as to the American Medical Association.

There can be no argument as to our plan of organization, what has been attained and our future quests. We who know are justly proud of it. We point with pride to that which has been wrought, to the efforts that have been expended and to the splendid manner in which our officers and executives have performed the duties that have been entrusted to them. We are elated with these headquarters and the spirit that emanates from them. But—we are in a minority, for 50,000 physicians are uninformed on the subject, and among the 90,056 physicians who are members of state societies some 40,000 are in partial or complete ignorance. Were this ignorance dispelled, I am certain that our state and national membership enrollment would advance to if not exceed the 100,000 mark. I hasten at this time to add that I am not advancing numerical membership as the final and most desired end of organization. Numerical strength is not and should not be our goal. Numerical strength should be sought only as an index that attests to the justification of existence. I might continue to enlarge further on this first foundation principle of acquaintanceship, for it lends itself to broad interpretation and application. I shall desist doing so and concern myself from now on with its application to being our definite program for 1925.

How shall it be applied? Here again I shall for brevity's sake set forth in table form:

Acquaintanceship—to bring about understanding.

- A. Of the American Medical Association:
  1. Its history and development.
  2. Plan of organization, its constitution and bylaws.
  3. Administration:
    - (a) Official personnel.
    - (b) Headquarters.
    - (c) Work and achievements.
    - (d) Service it renders to the physician.
  4. The Journal and other publications.
  5. Requirements for Fellowship.
  6. Benefits of Fellowship.

- B. State society:
  1. Organization.
  2. Officers and council.
  3. Activities.
  4. Membership relationship.
  5. Membership qualifications and benefits.
- C. Individual responsibility to:
  - (a) County, state and A. M. A. organizations.
  - (b) Fellow practitioners
  - (c) Community.
  - (d) Humanity.

This is the definite program that I submit for 1925. That we as state officers and editors of medical journals convey this information, this knowledge, if you so please to term it, to the physicians of this country. In developing this acquaintanceship, the result that is bound to ensue is an increase of numerical strength that will be an index to apply the four basic principles that have been advanced. It will be promptly perceived that this acquaintanceship will eventually produce results that more nearly express the ends that are being sought.

To that end, then, do I proffer this program:

First: That as we return to our home states we pledge ourselves to concentrate, so far as possible, in causing the medical men of our state to become fully informed and acquainted with all that medical organization as represented by our county, state and American Medical Association is and stands for and what it is doing.

Second: That this information be continuously distributed and conveyed to the informed and uninformed by means of:

A. Special articles, editorials, comments and advertisements appearing in each issue of our state publication.

B. That county secretaries be requested to act as local representatives for their counties and that they be supplied with application blanks for membership.

C. That, as we send certificates for 1925 state membership we include a plea and application for A. M. A. Fellowship.

D. Through such other avenues as may be determined.

Three: That we solicit Fellowship affiliation. Means and methods will suggest themselves as we become enthusiastic in this program and as we apply ourselves to its institution. One avenue that merits our thoughtful consideration is the county society unit. Have we not been neglecting state interest in our county societies, and is that not the reason why each state organization has a varying number of county societies that are dead or exist in name only? We need a greater acquaintance and a more intimate one with our county societies and their officers. We must manifest more interest in their activities and we greatly need to rejuvenate their spirit of work. In our 1925 program we must not lose sight of

the county society, and we may well utilize this avenue for a greater application of our purpose to establish acquaintanceship.

I would also suggest that our national Secretary cause to be compiled a concrete tabulation of the activities that emanate from national headquarters, including our councils, bureaus, publications, laboratory, directory and full-time executives. That this tabulation be imparted to our state membership in the most effective manner.

My final recommendation is that this conference pledge itself to this program and that we individually sincerely determine that we will go forth and by our zeal and effort cause 1925 to witness our bringing to the graduate doctors of medicine of this country a full degree of information that will firmly establish an acquaintanceship with our medical organizations that will beget an understanding in such full degree as will cause them to enroll as members and thus attain in a greater degree that which we have announced as the objects that govern our federacy.

## REPORT OF CASE OF ABDOMINAL PREGNANCY AT TERM\*

W. P. FITE, B.A., M.D.  
MUSKOGEE

The case about to be described presented such unusual aspects that the writer thought that it would be of enough general interest to present it before the Association.

The patient, a negro woman, was admitted to the hospital February 21st, 1920. Her general condition was very poor. She was greatly emaciated, skin dry, expression anxious, marked albuminuria, specific gravity 1010, trace of sugar, many hyalin and granular casts, temperature 101, pulse 116, respiration 24. Physical examination showed there to be a very large abdominal tumor, occupying almost the entire abdomen. Percussion of the abdomen was dull except in the epigastrium and in both the hypo chondriac regions. A very irregular somewhat movable mass could be plainly made out through the abdominal wall. The sensations were very suggestive of a fetus which lay to the right side of the abdomen. Vaginal examination showed an almost normal sized uterus in the anterior position, cervix somewhat softened and only slightly enlarged, conical in shape and both vaginal fornices clear.

The history of this case is indeed interesting. Her age was 36, the wife of a farmer,

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and mother of six children, all living and healthy except one which died of "summer complaint" at the age of two years. The youngest child was four years of age. All previous labors were normal. She stated that she had been pregnant in the winter and spring of 1918 and 1919 and that they had figured the child was due to be born by the middle of June 1919. As she had not gone into labor by the middle of June, 1919 a doctor was called who examined her and told her she would be confined that month. This did not occur, however, and all movement stopped before the first of July. Sometime in June, she had pains one night which she thought were labor pains, but these passed off before morning and she worked in the fields the next day. She continued in very good health all summer and fall and did her usual work in the house and field. She cooked Christmas dinner and became ill that afternoon with severe pain in the abdomen and went to bed and was confined to her bed from then until her admission to the hospital on February 21st. During this time, she had a temperature and complained of pain and soreness in the abdomen. About February 5th, she was seen by a doctor who told her she had a dead child in her uterus.

During the entire time of her pregnancy, she at no time had a bloody discharge nor symptoms that could be construed as those of ruptured ectopic or ruptured uterus and never any discharge of amniotic fluid.

She was operated on February 22nd. The abdomen opened through a midline sub-umbilical incision and a large cavity was opened which contained a nine pound male fetus in a state of early decomposition and bathed in a large amount of purulent material with the odor of colon bacillus. The placenta was necrotic and attached in the left iliac fossa and across to the right as far as the midline extending up under the root of the mesentery of the small intestine. The sigmoid was included in its implantation. The uterus showed no evidences of rupture. The fetus was removed together with the necrotic placenta, the latter coming away without hemorrhage. The cavity was swabbed out and loosely packed with gauze. The patient withstood the operation very well but died two days later of her general septic condition.

This pregnancy was apparently purely abdominal although it is possible that it could have resulted from an earlier tubal rupture or abortion even though no connection between the tubes and placenta could be demonstrated. Neither tube was removed and sectioned.

In going over medical literature on this subject there have been reviewed some eighty

authentic cases of abdominal pregnancy at or past term.

The outstanding symptoms of all have been, usually a history of sudden pain and the typical symptoms of ruptured ectopic in the first three or four months of pregnancy. A few were caused by rupture of the uterus late in pregnancy with extrusion of the fetus in to the abdominal cavity. Many developed symptoms of intestinal obstruction in the latter months (something practically never seen in normal pregnancy without the association of hernia or some previous abdominal operation.) The fetus usually occupied a position on one or the other sides of the midline and the extremities and the heart sounds appeared more superficial than usual. Vaginal examination practically always showed a slightly enlarged but more or less firm uterus with somewhat softened cervix that was distinctly different from the cervix of normal pregnancy in the latter months. Often portions of the fetus can be plainly felt through the vaginal fornices. At term, these cases go through a spurious labor which is often associated with bleeding and which is misleading unless a careful examination is made.

Within a few days after this spurious labor the placenta begins to undergo organic changes and the fetus dies to become—lithopedian, mummified, adipocere; skeletonized or may suppurate.

In modern times where there is an opportunity for diagnosis, these changes in the fetus are not waited for. In fact before the age of viability, immediate operation is consensus of opinion, whereas after the 7th month, the pregnancy may be allowed to proceed until the child will probably safely live, then operate unless untoward symptoms supervene. Do not, however, wait for spurious labor to set in with the probable death of the child.

In the histories of all these cases, there is one outstanding difficulty, the disposition of the placenta. Hemorrhage in attempted separation of the placenta is prominent in each case where this procedure was attempted. In a few cases in which the placental attachment was wholly on the adnexa or uterus, the supplying vessels were ligated and the whole mass removed with a minimum of hemorrhage as in the usual case of unruptured ectopic. On the other hand, should the placenta be attached to the parietal or visceral peritoneum or in some other location the problem is entirely different. Its immediate separation from such position (except the greater omentum, portions of which can be removed with it) is followed by alarming and

often fatal hemorrhage.

The procedures for surmounting this difficulty have been marsupialization of the wound and awaiting the separation of the placenta or closure of the abdomen in uninfected cases with later removal if necessary.

These cases, while very uncommon, occur occasionally and the possibility of an advanced abdominay pregnancy should be borne in mind wherever a train of symptoms resembling those described above occur in any pregnancy and should it occur, the case should be dealt with sensibly because the condition is highly dangerous to both mother and child. The writer has reviewed sixty three cases of abdominal pregnancy reported in the international medical literature since 1809 in which both the mother and child were saved by operation. The review of the histories of these cases is very enlightening as to the difficulties and possibilities in handling cases of abdominal pregnancy at or near term.

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#### A BOOK OF IMPORTANCE IN THE PRESCRIBING OF DIETS

The Dietetic importance of pure, plain, granulated gelatine has attracted so much attention, and the demand for more information has reached such a volume that the Laboratories of the Charles B. Knox Gelatine Company have prepared a book of dietetically correct recipes with gelatine for Diabetes, Nephritis, High Blood Pressure, Gastritis, Gastric Intestinal Disorders, Fevers, Constipation, Obesity, and general mal-nourishment in infants and adults.

The recipes have been most carefully worked out under authoritative auspices and with each recipe is given a quantitative analysis of Carbohydrates, fat, protein and calory value.

The Diabetic section of the book is a most valuable contribution to advanced dietetic practice, with or without the insulin treatment. Another important chapter is the report of T. B. Downey, Ph.D., Fellow at Mellon Institute (Pittsburgh) on the value of pure, unflavored gelatine as a protective colloid in the modification of milk in infant feeding, which in no way changes prescribed formulas. Dr. Downey has determined, by standard feeding tests, that the addition of 1 per cent of gelatine to a quart of milk increases the yield of nourishment by about 23 per cent.

Furthermore, these feeding tests determined that the protective colloidal action of the gelatine was highly efficacious in aiding the complete digestion and resulting assimilation of other basic foods of the vegetable, fruit, meat and fish families.

A most important feature of this book is the simple and complete directions for the prepara-

tion of these dishes, without which a prescribed diet so often fails, despite the care and caution of the physician.

The book will be mailed upon request—postpaid and free of charge—by the Charles B. Knox Gelatine Company, Johnstown, New York, to any physician or dietician who requests it.

#### THE SUPRARENAL PRINCIPLE

When the active principle of suprarenal glands was isolated for the first time—by Takamine in 1900—it was named Adrenalin, from the fact that the medullary portion of the suprarenal gland is properly known as the adrenal body. The history of suprarenal therapy has been written for the most part from experience with Adrenalin, and the majority of writers on the subject have given the product its proper name as designated by its discoverer well-nigh a quarter of a century ago.

There is now an Adrenalin family—in addition to the liquid in vials and ampoules; an ointment, a suppository, and an inhalant, all bearing the name and all depending upon the presence of Adrenalin in the formula for their efficacy.

The manufacturers, Parke, Davis & Co., announce that they have a booklet containing practical information on all the Adrenalin products, which they will be glad to send to any inquiring physician.

*Doctor:*

*See your*

*County*

*Secretary*

*and pay*

*your 1925*

*dues*

*NOW!*

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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### EDITORIAL

#### HOSPITALIZATION PRIVILEGES UN- DER THE WORLD WAR ACT OF CONGRESS

The "Reed-Johnson" Bill enacted by the last session of Congress has, no doubt, been subject to as much, if not more misconception and misconstruction than any other action of the Congress, not excepting even the Volstead Act. Stripped of as much ambiguity and uncertainty as seems to be possible by every reasonable deduction the enactment seems to take into consideration the following: First: Any veteran of the Spanish-American, Philippine, Boxer rebellion and World War is entitled to the benefits of the Act, but,

within certain limitations; and the best interpretation seems to be as follows: Veterans of any of the above wars already hospitalized and under the pressing need of immediate and continuous treatment are to be first considered.

Veterans of any of the above wars who may be shown to be in immediate and pressing need of surgical and immediate attention are to be given like attention.

Second: Cases falling into what is generally denominated by medical category as "chronic," "border-line," "uncertain" or "questionable" or "debatable" as to their rights as to possible future compensation necessarily fall into the class which the dictates of humanity and common sense indicate should be very carefully considered. Certainly no one with a grain of common sense or reason should insist that such cases, thousands of which already cumber the records of the Public Health Service and the Veterans Bureau, and many of them without the slightest merit, should take up space and occupy beds badly needed by cases obviously entitled to care or more urgent from every standpoint.

Beneficiaries, real and alleged, may rest assured that as long as there remains a single unoccupied bed in any hospital designated by government for the care of veterans of any of the wars designated by the Reed-Johnson Act, they will not be allowed to suffer for lack of care. This takes into consideration that in far too many cases undeserving cases must and will be given hospitalization pending settlement of the rights involved in the case, each one being a problem of individual history, and right and showing on the part of the claimant. Claimant wishing hospitalization should present written statement from physician showing his condition and need for hospital care.

The entire medical profession of the country is placed upon guard and warning as to the rights of these beneficiaries. Too many men miserably unable to pay for medical care have been called upon to obligate themselves for care which was easily obtainable from proper authorities constituted to give them care they were clearly entitled to. Too often medical men fully advised as to this right of the ex-service man have remained silent on the point, milking the victim to the limit, then, after the case became useless and unpromising from the financial standpoint, deserting the man and leaving him to wander finally into the hospitable care of a government hospital already awaiting his reception. This especially applies to the victim of cerebrospinal syphilis, with all its attendant penalties of delay. Of all the neglected and

abused cases in mind, these hold the spotlight of pity and attention.

Every state has either its District Office or in the absence of such, one or more sub-district offices of the Veterans Bureau, located well in its confines, and, to these offices men needing attention should first apply for relief. When that formality has been complied with they will be directed to the proper office for examination, and, if found necessary, directed to some nearby Bureau hospital for care. Immediately concerning Oklahoma is the fact that these offices are located in Dallas, Texas, and Oklahoma City. Request for aid to either of the above offices will find immediate response. No one should apply directly to any hospital for care, except in dire and immediate extremity. Wire or telephone the nearest office.

### HOW YOU MAY HELP

Help for your JOURNAL and your organization may be extended in many ways too numerous to mention here, but we will note two methods by which everyone concerned may help. Your JOURNAL accepts only the best class of advertising. Shoddy material manufacturers, and purveyors of impossible pharmaceutical messes are given a wide berth, in fact they simply do not get in at all. The manufacturers, however, have a method of detailing the general profession, the detail man often making impossible representations of his wares, lauding their virtues, until the unwary busy practitioner swallows the bait and helps along the game by innocently trying out the stuff offered him with such sugar-coating. Now there is a way by which it may be ascertained at once, from an impartial body, the virtues or lack of such of any particular offering. That lies in consulting the Council on Pharmacy and Chemistry of the A. M. A. This body has no personal axes to grind. It impartially passes upon all offerings, and the practitioner disregarding their findings will surely come to humiliation and grief in the knowledge that he has been hoodwinked, sooner or later. So, ask the glib representative to show you where the Council has approved his offerings. In the absence of such "give him the air," then you will be safe.

Your advertisers spend a great deal of money comparatively with you for the support of your JOURNAL. It is nothing short of unfair to patronize a house, rival to them, when your supporter offers you products equal in quality and price. We know this situation arises only through forgetfulness of the situation. Hence it is again stressed for your benefit. Help those who help you.

### OUR ANNUAL APPEAL

This is mere repetition of the annual urge to our membership and county society officers to give over to the month of December every necessary effort toward the annual reorganization of the various societies, the collecting of annual dues, and enrollment of *every possible eligible new member* before 1925 begins. This is a great help to everyone in that the routine office work is expedited and disposed of so that other matters may be attended to. The new member enrolled at this time starts the New Year right and loses no possible advantage which is the case the longer his enrollment is delayed.

It is not out of the place here to note that never before in the history of medical organization has there been outlined a more ambitious and helpful program to the rank and file than was outlined and adopted at a recent meeting of the various state officers and officers of the national body, meeting in Chicago in November. This plan proposes to stimulate by every means the enrollment of every eligible now outside the organization, to organize wherever possible post-graduate and clinical societies so that every member, even the widely isolated, may have such advantages as are possible in his particular community.

We urge every individual member to help us in this work by promptly attending his December annual meeting, remitting at once to his county secretary, and soliciting the enrollment of every non-member properly eligible to membership. The county secretary should not be called upon to unnecessarily make sacrifices of his time in this work. If everyone helps him with a little kindly cooperation the road will be made smoother for all concerned. **DOCTORS, FALL IN FOR 1925.**

### Editorial Notes—Personal and General

DR. E. L. YEAKEL, Shawnee, has removed to Oklahoma City.

DR. WILL H. PAYNE, Yale, is a new member of the Payne County Medical Society.

DR. E. F. STEPHENS, Foss, has removed to Norman and established his practice there.

DR. and MRS. ARTHUR A. WILL, Oklahoma City, are spending an extended vacation at Tampa, Florida.

BRYAN COUNTL MEDICAL SOCIETY held a good meeting November 12 at Duncan, at the LeFlore Hotel.

WASHINGTON COUNTY MEDICAL SOCIETY met recently at Bartlesville with Dr. Carl Puckett, as the guest of the evening.

RADIOLOGICAL SOCIETY of NORTH AMERICA holds its 10th annual meeting at Kansas City on December 8 to 12, 1924.

OKLAHOMA STATE HOSPITAL ASSOCIATION meets in Tulsa December 9, 1924, in a full day's session.

OKLAHOMA CONFERENCE of the Methodist Church South is contemplating the erection of a quarter million dollar hospital at Guthrie.

I. B. OLDHAM, Jr., son of Dr. I. B. Oldham, Muskogee, has resumed his studies at the University of Tennessee, Medical Department.

McINTOSH COUNTY MEDICAL SOCIETY met November 18 at Checotah with Dr. G. W. West, Eufaula, who submitted a paper, and a clinic.

DR. CARL PUCKETT, State Commissioner of Health, attended the New Orleans meeting of the Southern Medical Assn., and delivered an address.

DR. P. M. RICHARDSON, Cushing, was called to the bedside of his father last month, who suffered a slight stroke of paralysis, at Jonesboro, Ark.

DR. C. A. HOWELL, Oklahoma City, attended the S. M. A. meeting at New Orleans and is remaining there for several weeks to take up special work.

WASHITA COUNTY MEDICAL SOCIETY will meet at Rocky on December 9, Dr. Carl Puckett, and Dr. E. S. Lain, Oklahoma City, being scheduled for addresses.

DR. EARL McBRIDE, Oklahoma City, recently attended the American Congress of Surgeons at New York, and the Tri-State Medical convention at Milwaukee.

DR. W. P. LIPSCOMB, Oklahoma City, announced that he has resumed his practice at 718 American Nat'l. Bank Bldg., limited to Eye, Ear, Nose and Throat.

OKLAHOMA COUNTY MEDICAL ASSN., will meet in joint session with the county dental society December 6 at the Chamber of Commerce, with a smoker and banquet.

DRUMRIGHT held a baby clinic November 17, at which seventy-five babies were presented, under the auspices of the State Board of Health, assisted by all the local physicians.

OKLAHOMA COUNTY is seeking the establishment of a full time County Health Unit, the proposed unit calling for the full time services of a nurse, health officer, sanitation officer and a clerk.

DR. HUGH JONES, Shawnee, recently had his new Ford and his medicine case stolen from the street in front of his office where the car had been parked; the case being found later by the side of the road in the country.

STEPHENS COUNTY MEDICAL SOCIETY met November 6 at Duncan, with Dr. E. S. Lain, President of the Oklahoma State Medical Assn., as the principal speaker, who addressed the meeting on "Medical Organization and its Benefits."

NEW YORK SKIN AND CANCER HOSPITAL alumni are requested to send their present professional office addresses to the secretary of the re-organized Alumni Association, Dr. Herman Goodman, 15 Central Park West, New York City.

TULSA COUNTY MEDICAL SOCIETY met November 24, with the following program: "The Modern Problem of Cancer as Illustrated by the Female Breast," Dr. Jabez N. Jackson, Kansas City, the meeting being open to the public, and held at the High School Auditorium.

CUSHING MEDICAL SOCIETY met last month in weekly meetings as guests of Drs. E. M. Harris, J. Walter Hough and H. C. Manning. The Society was in close cooperation with a crippled and tubercular Children's Clinic held under the auspices of the Cushing Rotary Club.

PAYNE COUNTY MEDICAL SOCIETY met at Cushing, November 14, with three prominent state men as guests; Mr. R. Heber Hixon, Managing Director Oklahoma Public Health Assn.; Dr. S. R. Cunningham, and Mr. Paul H. Fessler, Superintendent University Hospital, all of Oklahoma City.

WOODWARD COUNTY MEDICAL SOCIETY met at Supply, November 5, the guests of Mr. and Mrs. E. L. Bagsby and staff, and were addressed by Drs. W. W. Duke, Kansas City, A. S. Risser, Blackwell, and Carl Puckett, State Commissioner of Health. It was one of the best meetings of the year. Next meeting will be held at Woodward, December 10.

CONGRESSMAN H. B. SNYDER, of New York, Chairman of the Congressional Indian Affairs committee, and Chairman of a sub-committee of the world war veterans committee of the House of Representatives, paid an official call to the Soldier's Memorial Hospital at Muskogee (U. S. Veterans Bureau Hospital No. 90) on November 11th., accompanied by the entire Indian Committee.

DR. DANIEL W. WHITE, Tulsa, has recently been appointed as voluntary consultant on tracoma among the Indians of Oklahoma by the Commission of Indian Affairs at Washington. An advisory board has been named to assist in this work, consisting of Drs. E. S. Lain, Dr. A. L. Blesh, John W. Riley, Oklahoma City; Drs. G. A. Wall, Arthur V. Emerson, Tulsa, and Dr. Claude A. Thompson, Muskogee.

OKFUSKEE COUNTY MEDICAL SOCIETY met in annual open house session, including banquet, at Okemah the evening of November 17, the address of welcome being delivered by Dr. Allen C. Adams, Weleetka, Dr. A. C. McFarling, Shawnee, responding. A scientific program at which Drs. Bolend, Oklahoma City, and Harvey Randall, Okmulgee, presented papers, was enjoyed by the Society.

DR. and MRS. WALTER HARDY, Ardmore, have returned from a trip to New York and other eastern points, the doctor having attended the meeting of the American College of Surgeons.

THE OKLAHOMA STATE MEDICAL ASSOCIATION office, and the office of the JOURNAL, has been removed to 308 Barnes Building, Muskogee, to which address all communications should in future be sent.

**WHAT'S THE MATTER WITH US?** French Lick, Ind., Nov. 8.—The successful elimination of medical examination in the operation of Canadian Life Insurance companies was explained to members of the American Institute of Actuaries and the Actuarial Society of America in joint convention here yesterday. Seventeen Canadian companies, it was reported have dispensed with examination. The mortality record has been less than in the same period, under medical examination, it was said.

**DR. L. L. LUMSDEN**, United States public health representative with headquarters in Washington, who has just completed an examination of the lead and zinc mining fields in Ottawa county, declared his belief that the health conditions there had retrograded since the last government inspection.

Doctor J. G. Townsend predicted that the tuberculosis clinic established by the United States bureau of mines at Picher in November, will make an immediate improvement of living conditions of lead and zinc miners.

**U. S. VETERAN'S HOSPITAL 90**, Muskogee did itself proud upon the occasion of the visit of National Commander of the American Legion, General James A. Drain who inspected the hospital, exchanged congratulations with Colonel Hugh Scott, Commanding Officer, then seated himself to banquet with more than two hundred people, who heard Toastmaster Jim Hatcher delineate all the outstanding points of the various speakers. The General evidently thought more of visiting than eating and listening to speeches, for he excused himself and with Colonel Scott made a visit to the bed patients unable to greet him otherwise. This deviation was due to his late arrival in the City. Dr. Hugh Scott, General Roy H. Hoffman, H. H. Hagan, Dudley Monk, J. E. Criswell and Congressman Hastings, in addition to General Drain entertained the diners with various phases of humor and fact surrounding the disabled soldier. The distinguished visitor, who bears the distinction of having attained his present eminence in spite of the handicap due to a lost arm was commissioned in the army and serving over seas in that situation, and in spite of it, is an emphatic speaker and bluntly gave his hearers the last word in what the duty of the Nation is to its disabled soldiery. No one heard him and left with a doubt of his sincerity and his intention to go the limit in the performance of the tremendous tasks confronting him. His audience was composed of many leading citizens of the state in hospitalization and other interests of the disabled veteran.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

**A STUDY OF GASTROENTEROPTOSIS IN CHILDREN: ITS RELATION TO RECURRENT VOMITING WITH KETOSIS.**—Dewitt H. Sherman, M.D. and Edward C. Koenig, M.D., Archives of Pediatrics, Sept. 1924.

The authors find that recurring vomiting attacks in children are frequently due to gastroenteroptosis, either a simple mechanical abnormality or one markedly influenced by perverted nervous reactions. Where the condition is pronounced, a cure is effected by securing the enforced proper position of both stomach and the colon. This is brought about by (1) posture (2) rest and (3) ab-

dominal support. Where the child is old enough to cooperate in the matter of posture this is, in many cases, all that is necessary. As to rest, children with hypotonic or ptosed stomachs and colons always improve with rest, even if enforced by intercurrent mild illness. This is probably due to a revival of the tonus, especially of the stomach musculature. The abdominal support is applied and adjusted so that the organs are held in place, no matter what the body position is. The belt is made of material commonly used and applied mornings before rising, with the child lying on its back with the hips elevated above the shoulders. It is worn for from two to four years. It gives the proper tonus, as the child grows stronger the abdominal supporting tissues share in strength. Relief from the recurring attacks of vomiting are often dramatic.

**THE RELATION OF GONORRHEAL PROCTITIS IN MALE INFANTS TO HOSPITAL EPIDEMICS OF VULVOVAGINITIS.**—Albert H. Byfield, M.D. and Mark L. Floyd, M.D., Archives of Pediatrics, Oct. 1924.

The writers have found that rectal gonorrhea in male infants may be the source of repeated late outbreaks in hospitals when the epidemic is believed to have been stamped out. The fact that the rectal mucosa may be invaded by the gonococcus has been well established. Detection is made difficult, due to the absence of typical symptoms and the production of only slight pathological changes. The mucosa is reddened without much swelling. Ulceration is uncommon. Examination of smears made from the rectum by means of the platinum loop and by the glass tubes has demonstrated the presence of the infection. Cases of gonorrheal proctitis have been seen to develop arthritis. The authors think the contaminated thermometer is a great danger in spreading the disease. The use of individual thermometers in every infant hospital is urged. They believe that more rectal examinations should be made.

**THE VALUE OF THE BANANA IN THE TREATMENT OF CELIAC DISEASE.**—Sidney V. Haas, M.D., American Journal of Diseases of Children, Oct. 1924.

Celiac disease has for some time been known as one of the most troublesome disturbances of nutrition of late infancy and early childhood. So far as is known it is a functional disease characterized by inability to utilize properly carbohydrates and fats. The total quantity of carbohydrates that can be tolerated may be very small. The fats are, on the whole, better tolerated than the carbohydrates. These cases are extremely difficult to treat. They may show temporary improvement, but relapses usually occur. The clinical picture is usually that of an extremely pale child, very much underweight, extremely fretful and unhappy and having a markedly protuberant abdomen. Many of them show a photophobia. They practically all show a marked anorexia and food intolerance—especially for carbohydrates and fats.

The treatment is divided into two parts: (1) Keeping the gastro-intestinal tract as free from toxic accumulations as possible. The writer uses full doses of castor oil once a week and daily irrigation of the colon with as many liters of bicarbonate of soda solution (15 gm. to a liter of warm water) as may be necessary to obtain a clear return. (2) Dietetic—Plain milk should not be given: the most satisfactory substitute is pro-

tein milk. Lactic acid milk may be used in some cases. Dry milk, especially such as has been prepared from a fat free milk, is sometimes tolerated. Unsweetened and, rarely, sweetened condensed milk may be successfully used. Pot cheese may be given. Broths, white of egg and gelatin may be desirable. Carbohydrates must be avoided. The exception to this is the sucrose in the ripe banana. This is tolerated perfectly. The number given daily may be quickly increased by one or two daily until the demand for carbohydrates is satisfied. Infants of 24 months have taken sixteen bananas daily. Fats must be avoided. The child soon becomes more comfortable, the appearance improves and the weight begins to increase. Treatment is continued for an indefinite time—until a tolerance is established for other foods. The author reports that of ten patients eight so treated have made a clinical recovery. Two patients not so treated died.

#### SCHOOL CHILDREN CARRY INSURANCE.— Health News and Views—Hygeia, Sept. 1924.

Switzerland is the first country to inaugurate government insurance of school children. In some cantons it is voluntary and in some compulsory. The Canton Vaud was first to insure its children. In 1922 the government of the Canton Basel insured against sickness and accidents all pupils in the public schools, from the kindergartens to the higher grades of the industrial schools. Other cantons and municipalities have taken steps in the same direction.

In this, as in the other forms of government insurance, the premiums are paid jointly by the children and the government. It is reported that a bill for insurance of school children against sickness has been introduced in the Portuguese Senate.

#### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

#### THE BACTERIAL FLORA OF THE FAUCIAL TONSILS, WITH ESPECIAL REFERENCE TO HAEMOLYTIC STREPTOCOCCI AND ASSOCIATED HISTOPATHOLOGICAL CHANGES.— Bell, H. H.: Ann. Otol., Rhinol. & Laryngol., 1924, xxxiii, 305.

The author studied one hundred pair of tonsils which were removed because they were regarded by the laryngologist as diseased. Cultures were made from the throats before the tonsillectomy, from the removed tonsils, and from the throats after tonsillectomy.

Seventy of the one hundred patients were carriers of the haemolytic streptococcus of the beta type. Twenty patients with haemolytic streptococcus in the pharynx and in both tonsils were found free from this micro-organism when cultures were made from one to eight months after the tonsillectomy. Seventy per cent of the carriers of the haemolytic streptococcus and thirty per cent of the non-carriers gave a history of frequent attacks of sore throat and ear infection, swelling of the joints and rheumatism.

Tonsils showing the most marked tissue changes contained the largest number of bacteria within the lacunae as demonstrated by stained sections. Organisms with the morphological characteristics of streptococci were most constantly associated with acute processes.

Bell is of the opinion that the morbid changes

in the tonsils are dependent upon the number of bacteria present as well as their character.

#### METHODS AND INTERPRETATION OF THE FUNDAMENTAL TESTS OF HEARING.— Sonnenschein, R. Ann. Otol., Rhinol. & Laryngol. 1924, xxxiii, 423.

One of the most important purposes of the functional tests of hearing is the localization of the impairment of hearing. The history of the case, the pitch of the tinnitus, the patient's occupation, and the condition of the external ear, the drum membrane, the naso-pharynx, the nose and the pharynx must be determined.

In middle ear involvement the low pitched tones are heard less distinctly than the high pitched tones, i. e., the lower tone limit is elevated. In a nerve lesion the high pitched sounds are heard less distinctly than the low-pitched, but if there is marked involvement both are heard poorly.

With the Galton whistle and the monochord, the highest tones in middle ear involvement are usually normal, but in disease of the inner ear they are markedly reduced.

In conduction impairment, the Webbert test is usually lateralized to the worse ear, while in inner ear disease it is usually lateralized to the better ear.

In middle ear disease the bone conduction is usually found lengthened, while in inner ear disease it is usually shortened.

With the Rinne test there is usually a negative reaction in disease of the middle ear and a positive reaction in disease of the inner ear.

As a rule the drum membrane shows cloudiness, loss of luster, thickening, retraction, or perforation in middle ear disease. In otosclerosis the tympanic membrane is often normal or is pink over the region of the promontory. In internal ear diseases the drum is usually normal but may show changes if there has been any middle ear disease at any time.

#### CYCLOPLEGICS IN REFRACTION; PERMANENT LOSS OF ACCOMMODATION FOLLOWING THE USE OF HOMATROPIN.— Decker, J. C. Am. J. Ophth., 1924, vii, 443.

In cases of adults Decker uses homatropin (6 gr. to the ounce) routinely. One drop is instilled in each eye every fifteen minutes until from three to five drops have been given, depending on the patient's age, and refraction is done fifteen minutes after the last drop. After the examination has been made one or two drops of eserine solution are given for safety and comfort and to shorten the period of disability.

The patient whose case is reported in this article was subjected to the regular routine and given glasses. At the end of five days he was still unable to read large print. Ten days later, even after the free use of eserine the ciliary muscle remained paralyzed. Two months later after all foci of infection had been eliminated and all measures of general medication had been exhausted, there was still no improvement in the accommodative power. Finally the patient was given bifocal glasses and these proved entirely satisfactory.

The author is unable to explain the paralysis.

#### SOME PHASES OF THE GLAUCOMA PROBLEM.— Wilder, W. H.: Minnesota Med., 1924, vii, 343.

Wilder regards it as extremely difficult to make

a definite assertion regarding the causes of glaucoma because, in the examination of eyes that have been glaucomatous for some time, there is always the question as to whether the findings are the cause or the effect of the disease.

The condition occurs most commonly in middle and late life, at a time when the lens grows larger, reducing the circumlental space and interfering with the outflow of fluids by pressure upon the root of the iris. The fibers of the pectinate ligaments are thickened and the lymph channels are contracted. Glaucoma rarely occurs in persons who are in good health.

In acute congestive glaucoma, the diagnosis is simple but in the non-congestive forms the occasional or constant increase in intraocular pressure, the cupping of the disk, and the degree of loss of central peripheral vision must be borne in mind. The fields of vision should always be taken by the same person and in approximately the same light, and colors as well as form should be recorded accurately in order that comparisons may be made from time to time. Outlining of the blind spot and paracentral scotomata, both relative and absolute, is exceedingly important.

Operative procedures are necessary when, in spite of general treatment and the regular use of myotics, the tenometer records show increased tension, even though the increase is not great, and the fields show enlarging scotomata and slowly contract, with a possibly normal central vision.

#### SINUSITIS IN CHILDREN.—Hughes, W. K.: *Med. J. Australia*, 1924, i, Supp., 380.

Hughes discussed the frequency of sinusitis in children and the importance of the chronic form with polypoid degeneration of the antral mucosa without pus or mucus in the nose. Most of his twenty-seven cases were of this type and in all except one, the tonsils and adenoids had been removed before the patient was first seen.

The symptoms are usually general in character, such as constantly recurring cold, persistent cough and headache, running and stuffiness of the nose, asthma, epistaxis, bronchitis, otitis media.

In this report only the antrum is considered. The treatment requires the removal of all causes of nasal congestion such as tonsils and adenoids. The duration of the expectant treatment must be determined from the nature of the particular case. In cases with ear involvement the radical antrum operation should not be long delayed if the removal of the tonsils and adenoids fails. In acute purulent cases irrigation is used by some rhinologists but not by the author. Intranasal drainage is considered about as difficult as the Caldwell-Luc operation and is less satisfactory. A radical operation of the Caldwell-Luc type gives the best results when operation on the antrum is indicated. Postoperative irrigation is not indicated unless the discharge is foul.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
611 1st Nat'l. Bank Bldg., Oklahoma City

#### STUDIES ON THE RESPIRATORY ORGANS IN HEALTH AND DISEASE. A COMPARISON OF LUNG CAPACITY READINGS AND PHYSICAL SIGNS IN PULMONARY TUBERCULOSIS.—J. A. Myers, Ph.D., M.D. *Minnesota Medicine*, April 1922.

In this study observation were made on 230

men and women 200 of whom were tuberculous. The physical examinations were made by two specialists who diagnosed and classified the patients prior to taking the physical fitness test. The vital capacity and other necessary measurements were taken and the physical fitness computed by an individual having no knowledge of the physical findings. The physical findings and the vital capacity readings were then compared to obtain the findings presented here.

The patients were grouped as follows: (1) Suspected cases (a) no physical signs, (b) indefinite physical signs; (2) definitely tuberculous cases, (a) minimal, (b) moderately advanced, (c) far advanced.

The average physical fitness for the 21 cases in group one (a) is 98, the highest percentage is 122, the lowest 80. Of the seven cases in group one (b) the average percentage is 93, the highest 125 while the lowest is 74.

In group two there are 45 cases with signs of minimal disease. The average percentage for this series is 90, the range of physical fitness from 64 to 126. In the 87 cases showing evidence of moderately advanced disease the average physical fitness percentage is 70, the highest 112, the lowest 26. The average physical fitness of the 70 far advanced cases is 49, the range is between 26 and 86 percent.

There is wide individual variation in lung capacity due to such factors as occupation, past physical training, obesity, and age. The examiner must be on guard when a patient with questionable or definite physical signs proves to have a physical fitness of 100 or more. The patient should be given closest observation as the 100 percent lung capacity may be apparent rather than real for this individual.

When the percentage falls as low as 70 to 80 one may be sure that there is disease of clinical significance tho the physical examination may not show it. It is necessary to watch these patients very closely.

The lung capacity test while not infallible is more valuable than the physical signs in ascertaining the toxicity and severity of the disease. Subsequent tests are very valuable in studying the effects of the treatment and in rendering a prognosis. Physical signs show what has occurred in the lungs in the past, the lung capacity test shows to what extent the lungs are able to function.

#### MALIGNANT TUMOR OF THE LUNG. NECESSITY FOR EARLY OPERATION.—Howard Lilienthal, M.D. *The Archives of Dermatology and Syphilology*, Jan. 1924.

The author feels that malignant neoplasms of the lung have not received the attention necessary for early diagnosis and operation. Thoracic surgery has made great advances in the past few years and thoracic operations are followed by much more success. He advocates the early use of the x-ray and bronchoscope.

Primary tumors of the parenchyma may be demonstrated by the x-ray before there is any impairment of function other than a general deterioration of the patient's health and before the ear can detect changes by percussion or auscultation. By the use of the bronchoscope it is possible to demonstrate new growths in the bronchial tubes and to remove specimens for microscopic examination. When there is a dry cough, often spas-

modic, gradually increasing in severity, when sputum appears tinged with blood, new growth of the bronchial wall should be thought of at once and an endoscopic examination made immediately.

Early lobectomy is urged by the author. The new growth is thus not only removed but the danger from infection is decreased by dealing with normal or comparatively normal tissues. He also advocates early exploration of all suspicious growths in the lungs and feels that benefit often follows even purely exploratory operations in apparently hopeless cases.

#### THE SELECTION OF PATIENTS AND OF OPERATION IN THE SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS.—

Howard Lilienthal, M.D., F.A.C.S. *American Journal of Surgery*, Jan. 1924.

Surgical treatment of pulmonary tuberculosis has made very slow advance in the United States. This is partly due to the fear of most phthisiologists of any surgical measure and to the lack of opportunity for observing the good results in properly selected cases. All men doing work of this sort should keep careful case records and make frequent reports so that reliable data may be acquired.

While artificial pneumothorax is an invaluable procedure it has its dangers and disadvantages and there are types of cases to which it is unsuitable or in which it has failed. The two main classes, both chronic, suitable for collapsing thoracoplasty are, (1) those cases in which the lung is adherent to the chest wall over so large a surface that artificial pneumo-thorax is either impossible or too little air can be put in to be of benefit; (2) unilateral cases in which there is such a degree of cavitation that the lung should never be permitted to function again. Included in this class also are those cases with great apical cavities in which it is desirable to compress the cavity alone. These cases may even be bilateral provided there is sufficient uninfected lung tissue to maintain life.

Three cases are reported and details of the operation given. Surgery cannot supplant medicine in the treatment of pulmonary tuberculosis. It should be resorted to only when medical and hygienic measures have failed and the patient's life intolerable or the prognosis grave. The surgeon must always remember that the patient still has tuberculosis and should always be referred back to the physician for long hygienic treatment.

The operation may have two distinct objects (1) placing an entire lung at rest, (2) obliteration of apical cavities. Collapsing thoracoplasty with phrenic nerve resection puts the lung at rest to a greater degree than is possible by any other known method. In carefully selected cases arrest or great improvement following this operation may be expected in about 75 per cent of the cases.

#### SYMPOSIUM ON THE LYMANHURST (MINNEAPOLIS) SCHOOL FOR TUBERCULOUS CHILDREN.—By Members of the Consulting Staff of the School. *The Journal-Lancet*, May 15, 1922.

#### LYMANHURST: THE REASON FOR AND ESTABLISHMENT OF THE SCHOOL.—F. E. Harrington, M.D., LL.D.

This school was opened in May 1921 for the diagnosis, care, treatment and education of definitely tuberculous children attending the public

schools of Minneapolis. It is conducted as an open air school, children unable to attend school and needing sanatorium care being sent to Glen Lake or the State Sanatorium. Modern facilities are provided here for the care and training of 180 children who might otherwise be a menace to the rest of the school population. This work is being carried on by the Board of Public Health and the Board of Education jointly.

#### CLASSIFICATION AND TREATMENT OF SUSPECTED TUBERCULOUS SCHOOL CHILDREN IN MINNEAPOLIS.—J. A. Myers, M.D., Ph.D.

Children suspected of having pulmonary tuberculosis by the school physicians, nurses and teachers are advised to have examinations either by their family physicians, the Lymanhurst outpatient clinic or by other clinics and dispensaries operating in the city. All positive cases reported by private physicians are excluded from the regular schools and sent to Lymanhurst.

The children are there divided into two groups, those showing a positive Von Pirquet but no evidence of disease and those showing evidence of active disease. The first group are returned to their regular schools while the second are all examined in detail by the specialists on the school staff. These children are divided into three groups according to the findings, (1) those infected and below normal although no definite disease can be demonstrated. These are sent to the Trudeau Fresh Air School. (2) Those having definite lesions but no evidence of activity. These are kept in the Lymanhurst School. (3) Those having active progressive disease and who are sent to the Glen Lake or the State Sanatorium.

Every effort is made to correct any defects and to improve the general health of the children. The children in both the Trudeau and the Lymanhurst schools live at home but are on a routine of rest and extra nourishment during the day. These schools are open during the summer and attendance is voluntary. Many pupils at Lymanhurst are given Alpine lamp treatments not only for the physical but for the psychic effects. Temperatures are taken twice daily and weights once a week. Toothbrush drills are given and the children are bathed regularly. Any pupil showing toxemia is carefully studied in the observation ward and sent to the sanatorium if there is any evidence of beginning activity.

The usual public school instruction is given in both these schools and schools are provided in the Glen Lake and State Sanatoria for those children who are able to study.

The objects of the work among tuberculous children are to make the earliest possible diagnoses, to withdraw those children from the regular schools who might be a menace to others, to educate the children and their families in the control, curability and prevention of tuberculosis and by education and training to prevent these children from developing into dependent illiterates.

#### CARDIAC SIGNS IN EARLY PULMONARY TUBERCULOSIS IN CHILDREN.—Thomas Ziskin, M.D.

It was found that the incidence of heart disease among these tuberculous children was about the same as in the non-tuberculous. Early tuberculosis does not affect the size, shape or position of the heart. A rough systolic murmur at the base of the heart indicates bronchial gland tuberculosis

in 81 per cent of the cases and is more reliable than D'Espine's sign. The blood pressure was higher than the average normal in 58 per cent and lower in 34 per cent of these children. The pulse rate was faster than normal. The functional capacity of the heart was normal.

### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

#### OBSERVATIONS ON THE WASSERMANN TEST.—H. M. Smith, Columbia, S. C. Southern Medical Journal, Vol. XVII, No. 9.

Every physician should understand the principles, their application and interpretation of the Wassermann reaction. More attention should be paid to taking of blood for Wassermann tests so as to avoid conditions that might give false positive and negative reactions.

##### Misleading Reactions:

1. Ingestion of alcohol as beverage or medicine often causes false negative reactions if blood is taken within twenty-four hours.

2. Blood taken shortly after ether or chloroform anesthesia may show false positive.

3. Bacterial contamination may render a positive blood negative or vice versa.

4. In known syphilitics sudden changes in reaction from positive to negative or negative to positive may occur without any relation to treatment whatever.

5. Yaws, T. B. and leprosy may give false positives.

6. With proper technique positive Wassermanns are usually dependable, more so than negative reactions.

7. Some bloods for various indefinite reasons are anticcomplimentary.

8. Types of syphilis giving negative reactions:

(a) Primary syphilis usually during first two weeks.

(b) Some cases of secondary syphilis.

(c) Congenital syphilis often in first five months.

(d) Neuro syphilis and latent and tertiary syphilis frequently give negative tests.

Interpretation is necessary as a therapeutic guide and as a diagnostic test. Continuous negative blood and spinal fluid and absence of all clinical symptoms for period of two years after adequate treatment is a reasonable standard of cure. Occasionally a case is found that is Wassermann-fast and further treatment may not bring about a negative Wassermann.

Spinal fluid examinations are too often inexcusably neglected.

It is estimated that from five to twenty per cent of the entire population is affected with syphilis and the Wassermann test should be included in every complete physical examination.

Marriage of syphilitics should not be permitted until after adequate treatment and absence of clinical symptoms, with also negative blood and spinal fluid persisting for at least two years.

E. W.

#### A SURVEY OF THE INTESTINAL PARASITES FOUND IN THE TERRITORY SUPPLIED BY ST. THOMAS HOSPITAL, NASHVILLE, TENNESSEE.—By J. A. and Jack Witherspoon, M.D. Nashville. Southern Medical Journal. Vol. XVII, No. 9.

The prevalence of hookworm disease in the South was first impressed on us by the Rockefeller Survey and showed a high percentage in certain districts. Before this time tape worms and round worms were often suspected. Amebic dysentery was suspected only in those recently coming from the tropics and having marked diarrhea with blood in stools. Amebic dysentery was probably spread in this territory by soldiers from Cuba and the Phillipines after the Spanish-American war. In the last three or four years the flagellates have come into prominence. Recently the trichomonas and lamblia are, with exception, looked upon as pathogenic parasites.

In St. Thomas Hospital stools from 375 patients who had entered this hospital for various reasons were examined for parasites and 19.5 per cent were found positive. The most frequent parasite was Ameba Histolytica, 12.8 per cent being pathogenic. Next in frequency was the flagellates, Chilomastix 4 cases; Trichomonas Intestinalis 26 cases; and Lamblia 10 cases.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D.  
1006 First Nat'l. Bank B'dg. Oklahoma City

#### 1. OSTEOMYELITIS. OSTEOMYELITIS OF THE ILIUM IN CHILDREN.—C. Bearse. Boston Med. and Surg. Journal, May 22, 1924, p. 883.

Two cases of this condition are reported with roentgenograms. Also there is a general summary of this condition. It is of rather infrequent occurrence. The etiology is the same as for osteomyelitis elsewhere. The pathology is somewhat different from that in the long bones, on account of the flat bones involved. Symptoms may be mild or severe, as in osteomyelitis elsewhere. Pain is located over the affected part. Roentgenograms show a punched out or vacuole appearance after the process has gone on long enough to cause destruction. Prognosis may be more grave on account of the proximity to the hip joint and the peritoneum. Complications are similar to osteomyelitis elsewhere. Treatment consists of early, liberal, surgical drainage and building up the general health to improve resistance.

#### 2. ARTHRITIS. THE SECOND GREAT TYPE OF CHRONIC ARTHRITIS IN ITS RELATION TO INDUSTRIAL ACCIDENT CASES.—Leonard W. Ely, M.D. California and Western Medicine, June, 1924, p. 260.

The problem considered is the relation of trauma to the bone and cartilage change seen in radiograms of so-called hypertrophic or osteoarthritis.

The view that the bone changes are the results of trauma is challenged because (1) bone can be injured in only one way, viz.: by fracture; (2) the

bony changes seen in these joints take a long time for their production, and when present in radiograms, must have been present for a considerable time previous; moreover, they are usually present in other joints not involved in the injury; (3) these changes are not present in children, yet children are subject to trauma.

The cause of hypertrophic arthritis has long been in doubt. Bacterial infection as a causative agent has not been demonstrated. The author states that intestinal parasites have been found in the stools of a large proportion of patients suffering from this disease, and are suspected as the cause of the bone lesions, their portal of entry being assumed to be suppurative osteomyelitis at the roots of teeth. He has demonstrated foci of aseptic necrosis in the bone marrow near the joints showing these lesions, which foci are the primary changes in production of the lesions. Following the development of these foci come new bone formation at joint margins with spurring and lipping; fibrillation, degeneration, and wearing away of the articular cartilage, with eburnation of the underlying bone. The synovial membrane is traumatized by the altered joint surfaces and becomes thickened, fibrous, and villous.

When a man with such a joint receives an injury, the pain and disability following injury may last indefinitely. He then makes claim for permanent disability. What relation does the trauma bear to the permanent disability? The author feels that the results of the trauma are temporary, and that the permanent pain and dysfunction are caused by the joint changes which existed prior to injury.

### 3. ARTHRITIS.

**THE USE OF SULPHUR IN THE TREATMENT OF ARTHRITIS DEFORMANS.**—Hobart A. Reiman, and George W. Pucher. *Am. J. Med. Sc.*, July, 1924, p. 77.

Flowers of Sulphur, dissolved in olive oil and sterilized at 150 degrees for two hours, was used; intramuscular injection of 1 cc. (7mg.), repeated at five to seven day intervals, increasing by 1 cc. each time until seven or eight doses were given. Some cases showed no reaction. Most showed nausea, vomiting, chills, restlessness, joint pains, and headache. Of seventeen cases observed, four showed marked improvement, four slight improvement. No improvement was shown roentgenographically. Three cases are reported in detail, and a table showing results in the seventeen cases. Metabolism studies were also made. Good results were shown only in cases without bony construction to joint motion. The results obtained are similar to those obtained by injection of non-specific proteins. It is doubtful if sulphur has any specific action in arthritis deformans.

### 4. KNEE JOINT.

**SURGERY OF THE KNEE JOINT.**—Willis C. Campbell. *Southern Med. Jour.*, Feb., 1924, p. 82.

One hundred and sixty-seven cases of the knee joint were taken up, classified and the different varieties gone into in some detail as to their pathology, indications for operations, and results. The following conditions are those mentioned.

Displaced semilunar cartilage; hypertrophy of the external semilunar cartilage; recurrent dislocation of the patella; loose bodies in the knee joint; foreign bodies; miscellaneous traumatic conditions; benign tumors; enlarged villi; diffuse proliferation of synovial membrane; ankylosis of the knee joint; tuberculosis of the knee.

## BOOK REVIEWS

**AN AFRICAN HOLIDAY**, a fascinating story of big game hunting in Africa, by Richard L. Sutton, M.D., LL.D., author of "Diseases of the Skin," silk cloth, 180 pp., illustrated with original pictures, \$2.25. The C. V. Mosby Co., St. Louis, 1924.

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Woods	Arthur E. Hale, Alva	Oscar E. Tempin, Alva
Woodward	C. J. Forney, Woodward	C. W. Tedrowe, Woodward

NOTE—Corrections and additions to the above list will be cheerfully accepted.

MEAD'S

**BETTER BABIES****SICK INFANTS**

A food formula adapted to the well baby is in most cases entirely unsuitable for sick infants.

*Athrepsia, Diarrhoeas,  
Colic in Breast-fed Infants,  
Non-thriving Breast-fed Infants,  
Loose green stools commonly seen in Breast-fed Infants*

can generally be controlled by the physician  
who is familiar with

**Mead's Casec**  
**Mead's Powdered Protein Milk**

*The value of these products has been demonstrated by pediatricists.*

We will be pleased to send any quantity of these products to any physician to enable him to determine their merits in any number of these types of cases.

**THE MEAD JOHNSON POLICY**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

**MEAD JOHNSON & COMPANY**

Evansville,



Indiana

# Suprarenalin Solution

A fine product in a convenient package

**SUPRARENALIN SOLUTION**  
1:1000 is the incomparable preparation of the kind. It keeps well and is put up in a g. s. bottle with cup stopper. By working from the solution in the cup, contamination of the contents

of the original package is avoided.

Ischemic action of Suprarenalin Solution is enhanced and prolonged by the addition of equal parts of Pituitary Liquid (Armour), the Premier Product of Posterior Pituitary.

**SUPRARENALIN OINTMENT 1:1000**

is very bland and its effects lasting

**ARMOUR AND COMPANY**

CHICAGO



## We Are Headquarters For The Endocrines

## "Formulas for Infant Feeding"

New Edition

### Whole Milk Formulas

**For Infants about Three Months Old**

(Average weight 12¼ pounds)

Mellin's Food 6 level tablespoonfuls

Whole Milk 16 fluidounces

Water 16 fluidounces

(This amount is sufficient for 24 hours.)

Give the baby 4½ ounces every 3 hours; 7 feedings in the 24 hours.

Increase the quantity of milk one ounce every sixth day until the amount of milk is 21 ounces, and decrease the quantity of water one ounce every fifteenth day until the amount of water is 14 ounces; then prepare the modification according to the formula for an infant four months old.

Details relative to the nutritive value of the above modification will be found on the opposite page.

### Analysis of the Foregoing Mixture

Fat.....		1.81
Proteins.....	{ milk 1.70 cereal .42	2.12
Carbohydrates..	{ lactose 2.29 maltose 2.40 dextrins .85	5.54
Salts.....		.52
Water.....		90.01
		<hr/> 100.00

### Weight in Grams of Food Elements in the Foregoing Mixture

Fat.....	18.10 Grams
Proteins.....	21.28 "
Carbohydrates	55.3 "
Salts.....	5.1 "

A total of 99.94 grams of well-balanced nourishment.

### Calories Contributed by Food Elements in the Foregoing Mixture

Fat.....	168 Calories
Proteins.....	87 "
Carbohydrates	227 "
Total Calories in mixture	= 482
Calories per fluidounce	= 15.1
Energy-quotient, or Calories per pound of body-weight	= 39.3

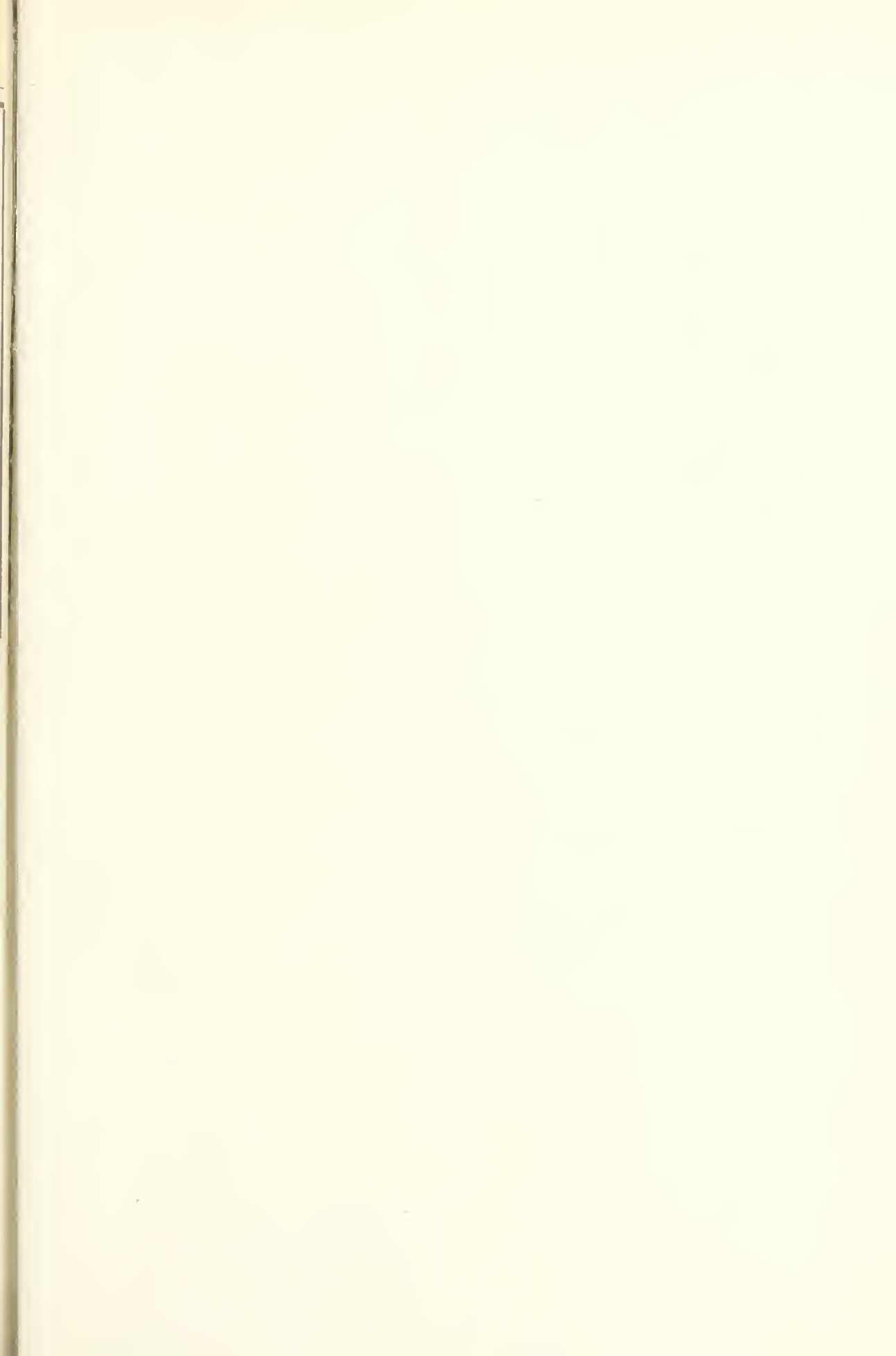
The amount of protein in the foregoing mixture equals the protein in 1.63 ounces of whole milk to each pound of body-weight

A thoroughly revised edition of our book, bound in leather, is now ready, and a copy will be mailed to physicians upon request.

To give some idea of the magnitude of this new work and how well it keeps step with the progress in infant feeding, we display two pages of this 80-page book. It will be noted that the formula adjusted to age and weight, together with simple instructions for progressive changes, is given on the left-hand page, and on the right practically every detail relative to the balance of nutrition is stated. This plan is followed throughout the book, thus giving information of daily usefulness not accessible in any other work of this nature.

Special formulas calculated to meet conditions other than normal with suggestions for their practical application, broaden the scope of the work, which in its entirety marks a distinct advance toward a better understanding of infants' nutrition.

**Mellin's Food Co.**  
177 State St., Boston, Mass.







Wm. H. H. H.



